

TEAC[®]



SERVICE MANUAL

T-9

Digital Synthesizer AM/FM Tuner

NOTES

1. In this manual, 0 dB is referenced to 1 μ V.
2. $\triangle$ Parts marked with this sign are safety critical components. They must always be replaced with identical components — refer to the appropriate parts list and ensure exact replacements.
3. PC boards shown are viewed from foil side.

1 SPECIFICATIONS

<FM TUNER SECTION>

Tuning Range 87.5 MHz — 108 MHz
Antenna Impedance 300 ohms balanced/75 ohms unbalanced
Usable Sensitivity 1.9 μ V (IHF) 10.8 dBf (New IHF)
50 dB Quieting Sensitivity MONO 4.5 μ V (IHF) 18.3 dBf (New IHF)
 STEREO 39 μ V (IHF) 37.0 dBf (New IHF)
Signal-to-Noise Ratio
 MONO 80 dB (IHF A filter)
 STEREO 72 dB (IHF A filter)
Capture Ratio 1.0 dB
AM Suppression Ratio 60 dB
Image Response Ratio 78 dB
IF Response Ratio 95 dB
Spurious Response Ratio 70 dB
Selectivity 60 dB (400 kHz)
Harmonic Distortion MONO 0.08 %
 STEREO 0.1 %
Stereo Separation 52 dB (1 kHz)
Frequency Response 30 Hz — 15 kHz +0.2 dB, -0.5 dB
Output Level/Impedance 60 — 2000 mV/10 kohms (VARIABLE)
 850 mV/10 kohms (FIXED)
FM Cal. Tone Level 50 % Modulation 400 Hz

<AM TUNER SECTION>

Tuning Range 531 — 1605 kHz
Usable Sensitivity 36 μ V
Selectivity 50 dB
Image Response Ratio 45 dB
Harmonic Distortion 1.0 % (1 kHz)
Signal-to-Noise Ratio 50 dB
Output Level/Impedance 20 — 600 mV/10 kohms (VARIABLE)
 200 mV/10 kohms (FIXED)
Power Requirements 100/120/220/240 V AC 50/60 Hz (General Export Model)
 120 V AC 60 Hz (U.S.A./Canada Model)
 220 V AC 50 Hz (Europe Model)
 240 V AC 50 Hz (U.K./Australia Model)
Power Consumption 12 W
Dimensions (W x H x D) 410 x 91 x 323 mm
 (16-1/8" x 3-9/16" x 12-11/16")
Weight 6 kg (13-4/16 lbs) net

- Improvements may result in specification or feature changing without notice.

2 SERVICE PRECAUTIONS

2-1 STATION LABELS

- Before removing the top/side metal cover, take out the slider by grasping the slider with a finger nail and pull it.

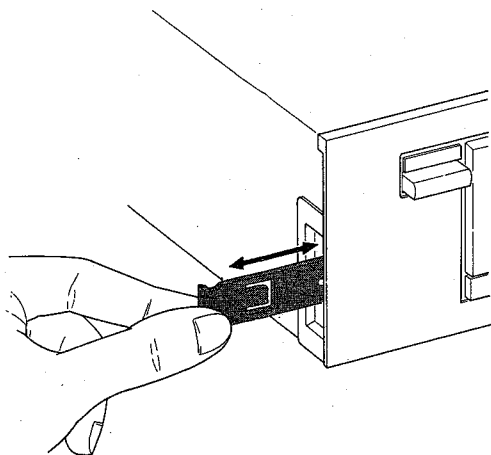


Fig. 2-1

2-2 VOLTAGE ADJUSTMENT

(FOR GENERAL EXPORT MODEL ONLY)

BE SURE TO REMOVE THE POWER CORD FROM THE AC OUTLET BEFORE REMOVING THE METAL COVER (HOUSING) AND REPOSITIONING THE VOLTAGE ADJUSTMENT PLUG.

- Take out the station label slider as explained in the above 2-1.
- Remove the top/side metal cover by removing the screws in each side of the cover.
- Locate the voltage adjustment PC board, pins and plug near the power transformer of the T-9.
- As shown in the illustration, remove the plug by pulling it out and re-install it to the pin to match the voltage indicated with the local voltage.
- Replace the cover and slider.

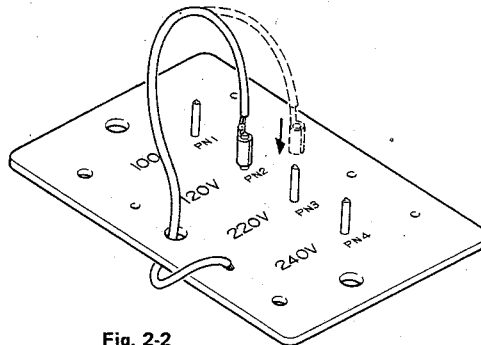


Fig. 2-2

3 ADJUSTMENT AND TEST POINT LOCATIONS

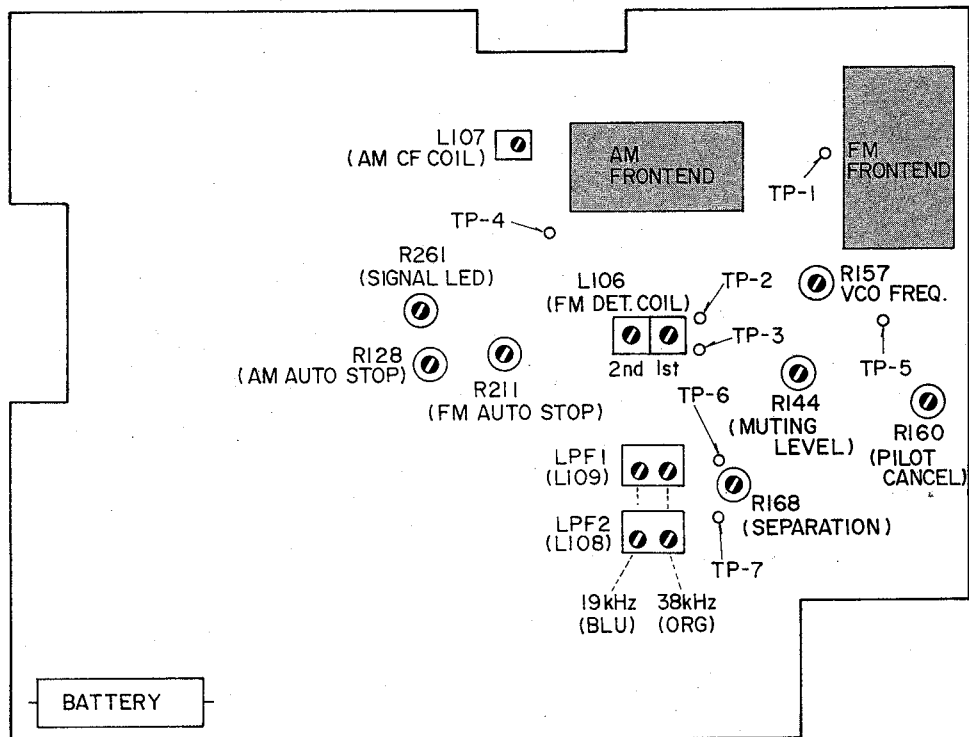


Fig. 3-1 Adjustment and test points

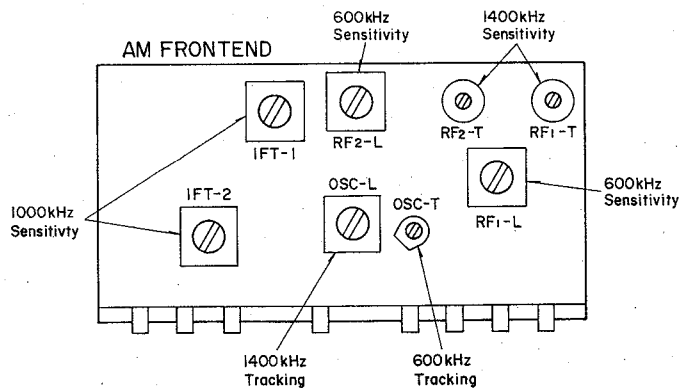


Fig. 3-2 AM frontend adjustment points

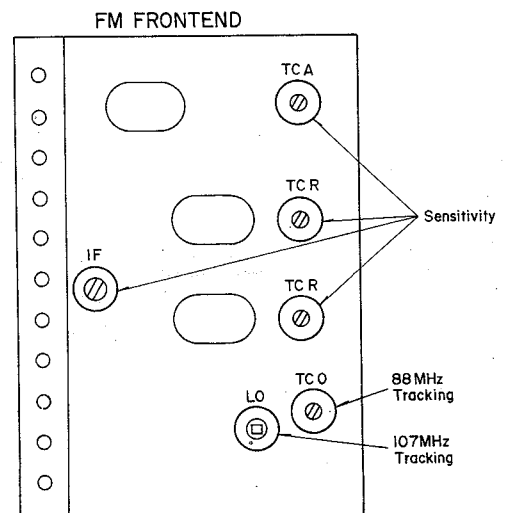


Fig. 3-3 FM frontend adjustment points

4 ADJUSTMENTS

4-1 GENERAL NOTICES:

1. 0 dB is referenced to 1 μ V.
2. Make sure that the T-9 is properly set for the voltage in your locality. If not, correct it by referring to section 2-2.
3. Before connecting AM signal generator or FM signal generator through impedance network to T-9, if AM and/or FM antenna is (are) already attached to the T-9, remove it (them) to prevent testing error.
4. Throughout all AM and FM section procedures, use basic connection shown at the top of each adjustment chart.
5. In the charts, instruction in the SETTING column at each step is continued from previous step indication unless specified here.

4-2 MEASURING EQUIPMENT REQUIRED

FM signal generator
Stereo modulator
AM signal generator
Impedance-matching network
Frequency counter
AC voltmeter
DC voltmeter
A differential voltmeter is preferable.
Oscilloscope
Distortion meter
AF oscillator

4-3 AM SECTION

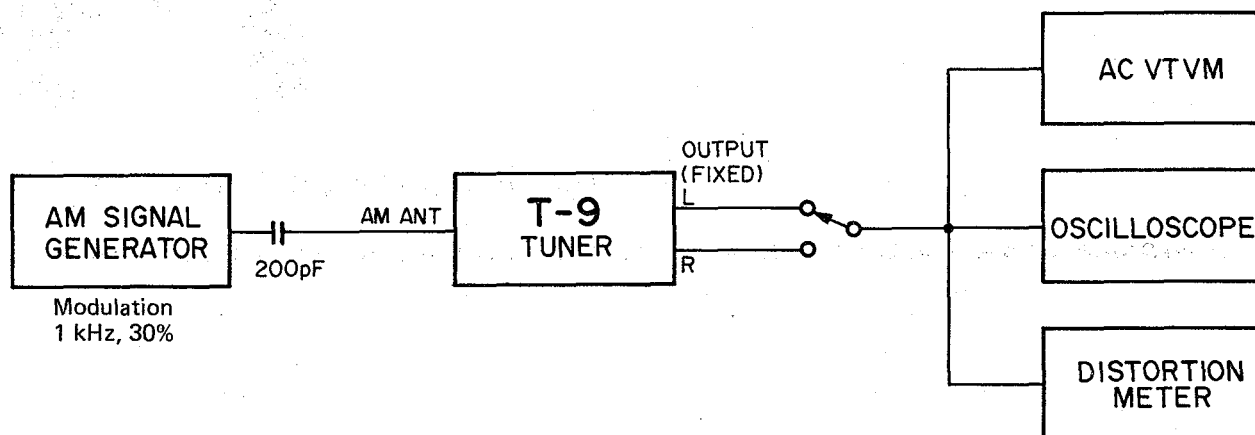


Fig. 4-1 Basic connection for AM section adjustments

T-9 initial settings:

AM/FM FUNCTION switches: AM
DIRECT switch: Refer to "MEMORY AND
ENTER switch: RECALL OPERATIONS"
MEMORY switch: on page 6.

MUTING switch: OUT/MONO
FM CAL switch: OFF
OUTPUT control: Minimum
(Not effective because of due to use of
OUTPUT (FIXED) terminals)

Note:
For portions marked □ and ■,
refer to "MEMORY AND RE-
CALL OPERATIONS" on page 6.

ITEM		SETTING	ADJUSTMENT POINT	MEASURING POINT	ADJUSTMENT
1 AM tracking	1-1	□ Memory 600 kHz (S.B. #1). □ Memory 1400 kHz (S.B. #2). • AM SG output: 74 dB (5012 μV)			
	1-2	• AM SG freq.: 600 kHz ■ Recall 600 kHz (S.B. #1).	OSC-T	OUTPUT	Max. output level with min. distortion
	1-3	• AM SG freq.: 1400 kHz ■ Recall 1400 kHz (S.B. #2).	OSC-L		
	1-4	Repeat 1-2 and 1-3 until the best results are obtained for both frequencies.			
2 AM sensitivity	2-1	• AM SG: Freq.: 600 kHz Output: 40 dB (100μV) ■ Recall 600 kHz (S.B. #1).	Alternating between: RF ₁ -L RF ₂ -L	OUTPUT	Max. output level with min. distortion
	2-2	• AM SG freq.: 1400 kHz ■ Recall 1400 kHz (S.B. #2).	Alternating between: RF ₁ -T RF ₂ -T		
	2-3	• AM SG freq.: 1000 kHz* □ Memory 1000 kHz* (S.B. #3).	Alternating between: IFT-1 IFT-2		
	2-4	• Set AM SG output - - - -	- - - - -	-	- to light first 3 LEDs.
	2-5		L107	SIGNAL strength meter	Adjust to light as many LEDs as possible. (at least 3). NOTE: If all 5 LEDs light with full intensity, reduce AM SG output a little, then readjust.
* Use 999 kHz for models other than USA and Canada					
3 Auto scan	3-1	• Set AM SG output - - - -	- - - - -	SIGNAL strength meter	- to start to light 3th LED.
	3-2	• Turn R128 fully ccw.(○).			
	3-3	■ Recall 600 kHz (S.B. #1). • Press AUTO, then UP buttons to automatically scan up the band.	R128	Display window	Turn R128 cw. (○) to stop auto-scan when 1000 kHz is reached.
	3-4	■ Recall 1400 kHz (S.B. #2). • Press AUTO, then DOWN buttons to automatically scan down the band.			
* Use 999 kHz for models other than USA and Canada					
4 Distortion	4-1	• AM SG: Freq.: 600 kHz Output: 74 dB (5012 μV). ■ Recall 600 kHz (S.B. #1).	Check	OUTPUT	1.5 % or less distortion
	4-2	• AM SG freq.: 1000 kHz* ■ Recall 1000 kHz* (S.B. #3).			
	4-3	• AM SG freq.: 1400 kHz ■ Recall 1400 kHz (S.B. #2).			
	* Use 999 kHz for models other than USA and Canada		4-4	Change AM SG output to 40 dB (100 μV) then repeat 4-1 through 4-3.	

MEMORY AND RECALL OPERATIONS

Portions marked with symbols (□, ■) in the adjustment procedure charts need further explanation. So, using actual examples in the charts, detailed instructions are provided. Note that "S.B. #1" below is an abbreviation of "selector button #1".

1. □ Memory 600 kHz (S.B. #1) 4-3 AM SECTION, step 1-1
2. ■ Recall 600 kHz (S.B. #1) 4-3 AM SECTION, step 1-2
1. Press the MEMORY switch to the ENTER position.
2. Press the DIRECT switch to clear the display window and initiate the direct entry mode.
3. Key in the selector buttons in the order of #6, #0, and #0 to display "600 kHz" in the display window.
4. Press the ENTER switch, then within 3 seconds press selector button #1 to store the 600 kHz reception ready mode into the memory of the T-9 for immediate recall later using the same button.
5. Press the MEMORY switch to the LOCK position to prevent the contents of the memory (600 kHz) from accidental alteration.
1. Simply press the selector button #1 to display "600 kHz" previously stored by the same button (4-3 AM SECTION, step 1-1).
2. Because AM SG has been set to transmit a 600 kHz to the T-9, which can receive then output actual 600 kHz, adjustment via OSC-T can be made for max. output level with min. distortion.

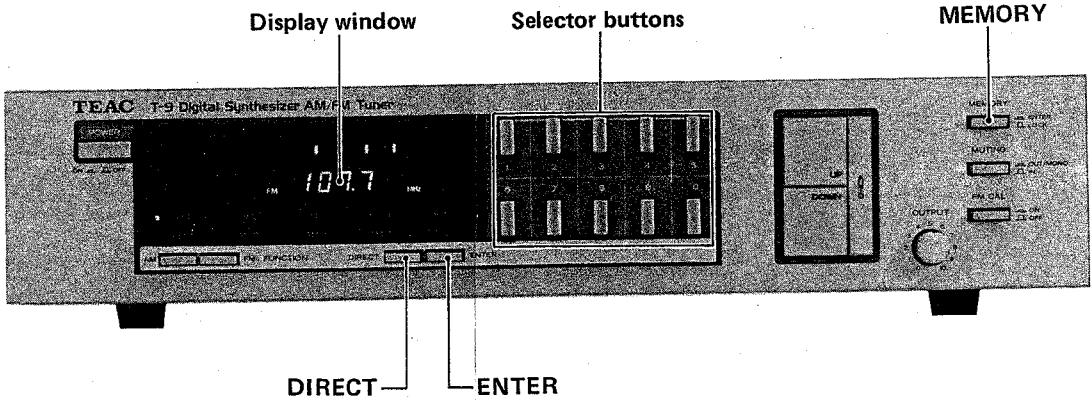


Fig. 4-2 Control switch location

4-4 FM SECTION

NOTES ON CONNECTIONS AND CHART

The relation between output level indication (dB) of FM SG (signal generator) and T-9's antenna input power (dBf) under the condition shown by Fig. 4-3 is as follows:

A. When the FM SG level indicator shows the open-end output voltage (dB)

$$\text{dBf} = \text{FM SG level indication (dB)} - 6.8 \text{ dB}$$

$$\text{FM SG level indication (dB)} = \text{dBf} + 6.8 \text{ dB}$$

B. When the FM SG level indicator shows the matched-end output voltage (dB)

$$\text{dBf} = \text{FM SG level indication (dB)} - 0.8 \text{ dB}$$

$$\text{FM SG level indication (dB)} = \text{dBf} + 0.8 \text{ dB}$$

The FM section chart below applies the principle stated in A. So, as an example, if FM SG level indication reads 72 dB, antenna input power becomes 65.2 dBf.

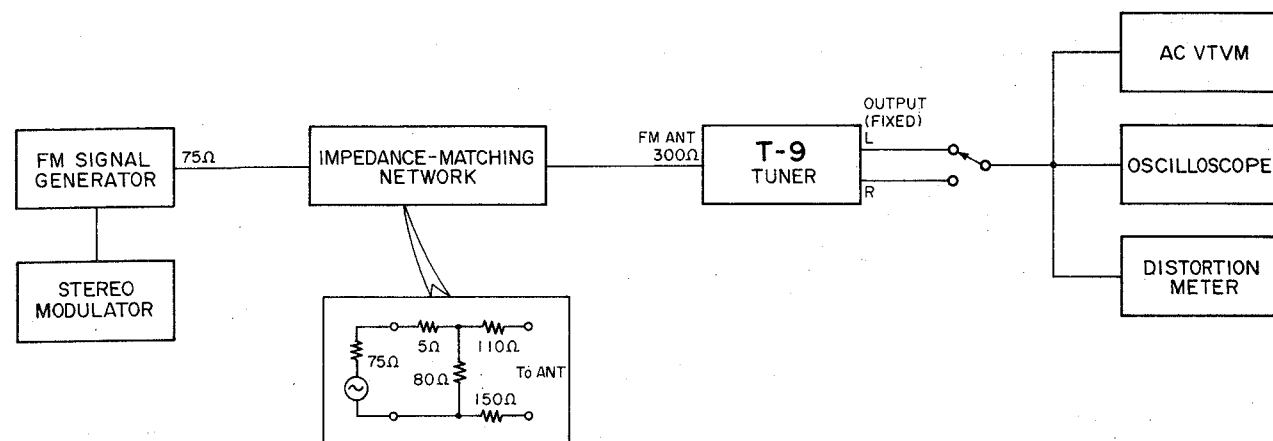


Fig. 4-3 Basic connection for FM section adjustments

T-9 initial settings:

AM /FM FUNCTION switches: FM
DIRECT switch: Refer to "MEMORY AND
ENTER switch: RECALL OPERATIONS"
MEMORY switch: on page 6.

MUTING switch: Designated in the chart
FM CAL switch: OFF
OUTPUT control: Minimum
(Not effective due to use OUTPUT (FIXED)
terminals)

Note:
For portions marked □ and ■,
refer to "MEMORY AND RE-
CALL OPERATIONS" on page 6.

ITEM		SETTING	ADJUSTMENT POINT	MEASURING POINT	ADJUSTMENT	
1 FM tracking	1-1	• MUTING SW.: IN • Connect DC voltmeter between TP-2 and TP-3. • Apply no FM signal.	L106 (1st)	Between TP-2 and TP-3	DC voltmeter: 0V	
	1-2	• Disconnect DC voltmeter. □ Memory 88 MHz (S.B. #4). □ Memory 107 MHz (S.B. #5). • FM SG: Modulation: 1 kHz, 100 %, MONO - Level indication: 72 dB (3981 μV) (T-9 ANTENNA input: 65.2 dBf)				
	1-3	• FM SG freq.: 88 MHz ■ Recall 88 MHz (S.B. #4).	TCO	OUTPUT	Max. output level with min. distortion	
	1-4	• FM SG freq.: 107 MHz ■ Recall 107 MHz (S.B. #5).	LO			
	1-5	Repeat 1-3 and 1-4 until the best results are obtained for both frequencies.				
2 FM sensitivity	2-1	• FM SG: Freq.: 108 MHz - Level indication: 32 dB (40 μV) (T-9 ANT input: 25.2 dBf) • MUTING SW.: OUT/ MONO □ Memory 108 MHz (S.B. #6).	TCA TCR (two) IF	OUTPUT	Adjust in any order for min. distortion.	
	2-2	• Connect DC voltmeter between TP-2 and TP-3. • FM SG level indication: 72 dB (3981 μV) (T-9 ANT input: 65.2 dBf)	L106 (1st)	Between TP-2 and TP-3	DC voltmeter: 0V	
	2-3		L106 (2nd)	OUTPUT	Min. distortion	
	2-4	Repeat 2-2 and 2-3 until the best results are obtained.				
	2-5	Disconnect DC voltmeter.	R261	SIGNAL strength meter	Adjust so that 5th LED starts to light.	
3 Auto scan and muting	3-1	• FM SG: Freq.: 98 MHz - Level indication: 57 dB (708 μV) (T-9 ANTENNA input: 50.2 dBf) □ Memory 98 MHz (S.B. #7). • Turn R211 fully CCW. (○).				
	3-2	■ Recall 88 MHz (S.B. #4). • Press AUTO, then UP buttons to automatically scan up the band.	R211	Display window	Turn R211 cw. (○) to stop auto-scan when 98 MHz is reached.	
	3-3	■ Recall 107 MHz (S.B. #5). • Press AUTO, then DOWN buttons to automatically scan down the band.				
	3-4	• FM SG level indication: 32 dB (40μV) (T-9 ANT input: 25.2 dBf) • MUTING SW: IN ↔ OUT/MONO	R144	OUTPUT	Adjust to mute signal when MUTING sw. in "IN", and to output signal when in "OUT/ MONO".	

Note:
For portions marked □ and ■, refer to "MEMORY AND RECALL OPERATIONS" on page 6.

ITEM		SETTING	ADJUSTMENT POINT		MEASURING POINT	ADJUSTMENT
4 Distortion	4-1	- FM SG: Freq.: 88 MHz Level indication: 72 dB (3981 μV) (T-9 ANT input: 65.2 dBf) - MUTING SW.: OUT/MONO ■ Recall 88 MHz (S.B. #4).	Check		OUTPUT	0.08 % less distortion
	4-2	- FM SG freq.: 98 MHz ■ Recall 98 MHz (S.B. #7).				
	4-3	- FM SG freq.: 108 MHz ■ Recall 108 MHz (S.B. #6).				
		5-1	FM SG: Freq.: 108 MHz Modulation: AF (1 kHz) 91 % Pilot (19 kHz), 8 % Level indication: 72 dB (3981 μV) (T-9 ANTENNA input: 65.2 dBf)			
5 FM MPX section	5-2	- MUTING SW.: IN - Without applying any FM signal, connect a external frequency counter to TP-5 and GND.	R157		TP-5	Frequency counter: 76 kHz ($\pm$ 50 kHz)
	5-3	Apply only pilot signal from FM SG.	Check			Frequency counter: to be stabilized at 76 kHz ($\pm$ 50 kHz)
	5-4	Disconnect a frequency counter.	R160		OUTPUT (either L- or R-ch)	Minimize 19 kHz leakage.
	5-5	Set FM SG as in 5-1 above,	R168	except only apply to L-ch.	OUTPUT (R-ch)	Minimize 1 kHz leakage to R-ch.
	5-6	except only apply to R-ch.		OUTPUT (L-ch)	Minimize 1 kHz leakage to L-ch.	
			5-7	Repeat 5-5 and 5-6 so that leakage level at each channel becomes equal.		
6 FM CAL switch	6-1	FM SG: Modulation: 1 kHz, 50 %, MONO	Check		OUTPUT	Note output level as reference for 6-2.
	6-2	FM CAL SW.: ON				Measured output level should equal that in 6-1.
7 LOW PASS FILTER	7-1	- FM CAL SW.: OFF - Disconnect impedance-matching network from T-9. - Connect AF oscillator (OSC) to TP-7 and GND. - AF OSC freq.: 19 kHz	LPF2 (L108)	blue core	OUTPUT (L-ch)	Minimize 19 kHz leakage.
	7-2	AF OSC freq.: 38 kHz		orange core		Minimize 38 kHz leakage.
	7-3	- Connect AF OSC to TP-6 and GND. - AF OSC freq.: 19 kHz	LPF1 (L109)	blue core	OUTPUT (R-ch)	Minimize 19 kHz leakage.
	7-4	AF OSC freq.: 38 kHz		orange core		Minimize 38 kHz leakage.

5 BLOCK DIAGRAM

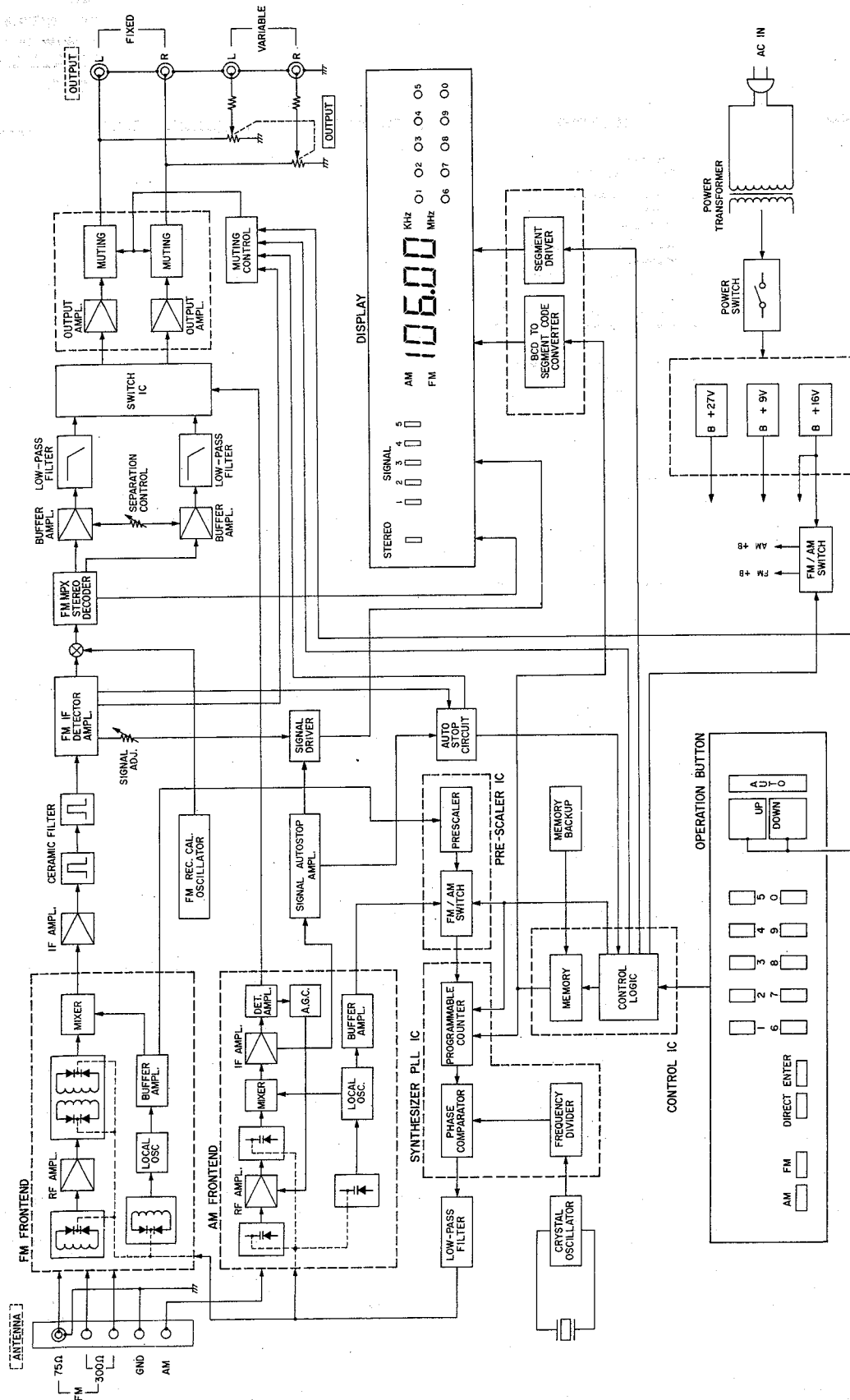
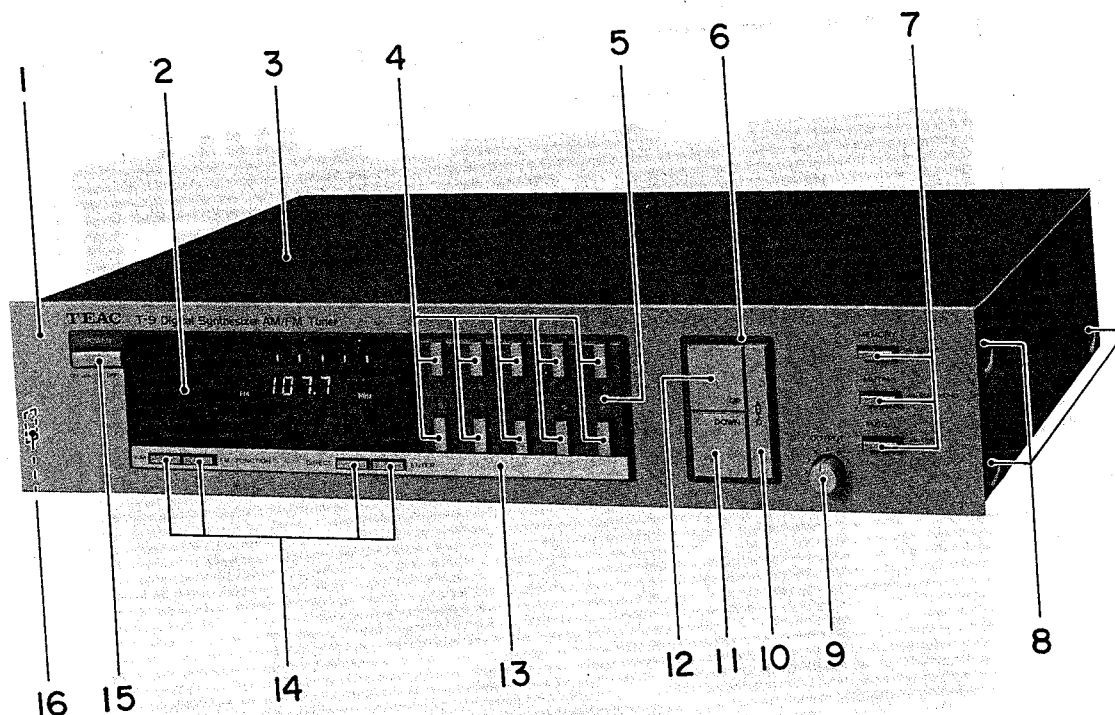


Fig. 5-1

6 PARTS LOCATION AND PARTS LIST

PARTS LOCATION-1

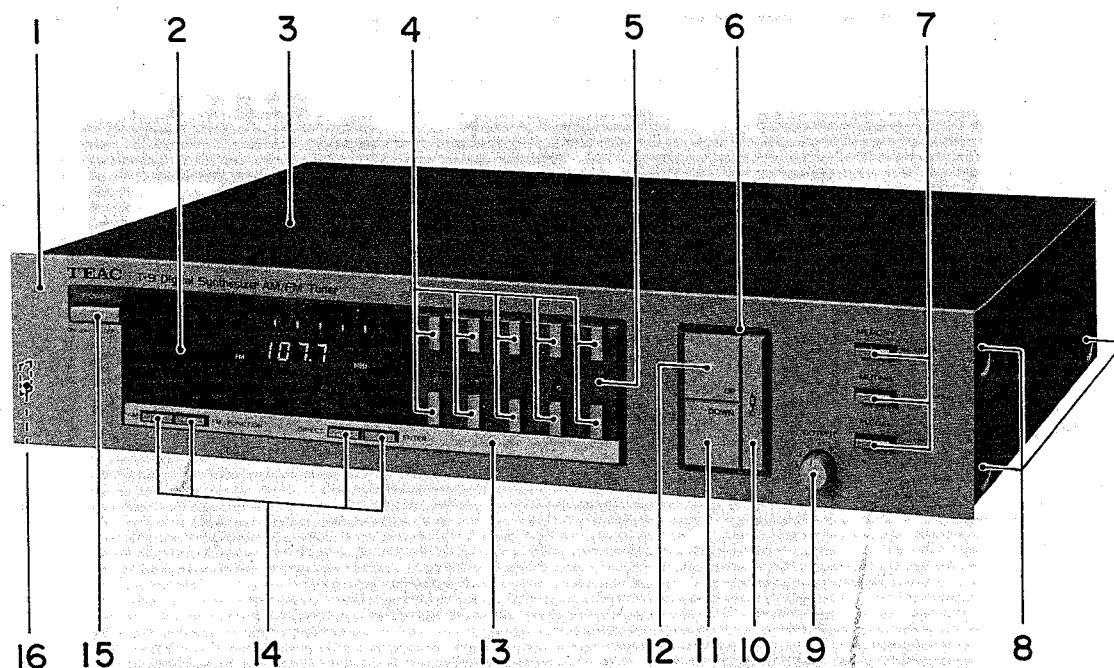


Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1 - 1	*5800097300	Panel, Front	
1 - 2	*5800092001	Cover, Meter	
1 - 3	*5800097500	Cover, Top	
1 - 4	5800095700	Button, Selector; B	
1 - 5	*5800097202	Escutcheon, Panel	
1 - 6	*5800097600	Escutcheon, Button	
1 - 7	5800092400	Button, Selector; A	
1 - 8	*5783114006	Flange Screw, M4 x 6 (BLK Ni)	
1 - 9	5800094001	Knob, Sub-VR	
1 - 10	5800098400	Button, AUTO	
1 - 11	5800098300	Button, DOWN	
1 - 12	5800098200	Button, UP	
1 - 13	*5800096003	Plate, Escutcheon	
1 - 14	5800094900	Button, Selector; C	
1 - 15	5800095500	Button, Power	
1 - 16	*5800095800	Escutcheon, Slider	

6 PARTS LOCATION AND PARTS LIST

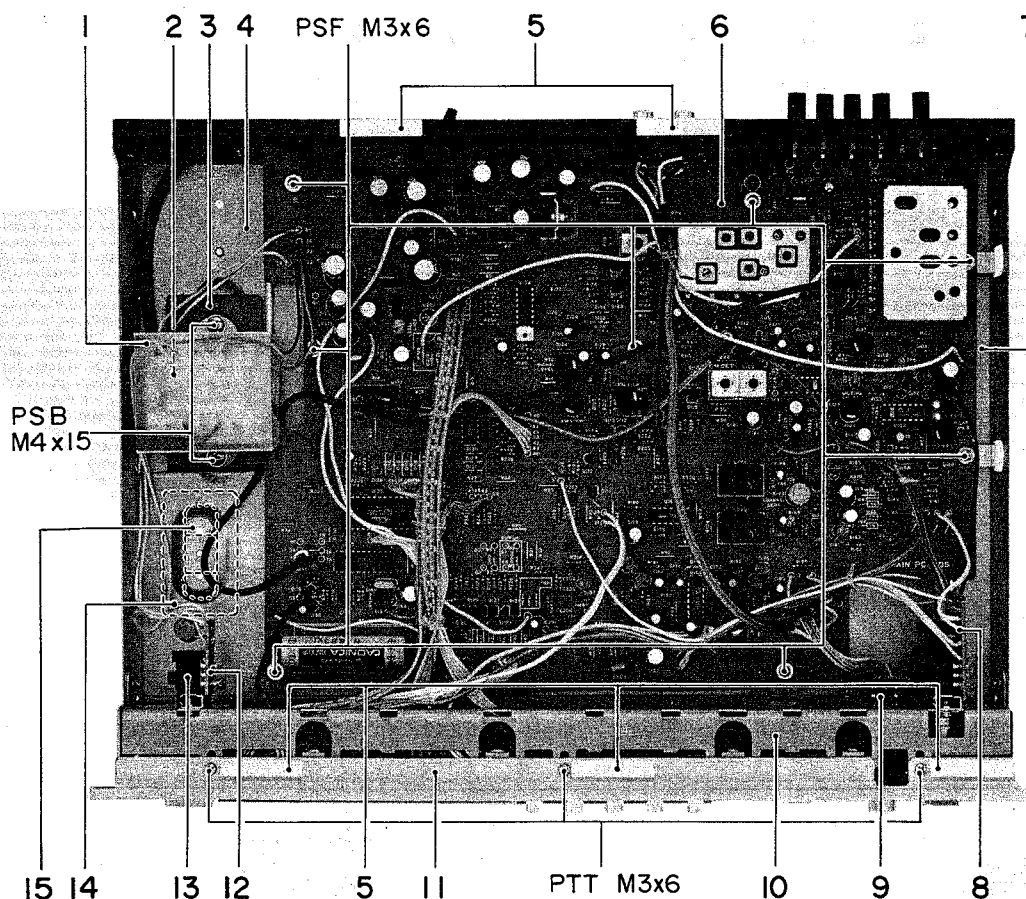
PARTS LOCATION-1



Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1 - 1	*5800097300	Panel, Front	
1 - 2	*5800092001	Cover, Meter	
1 - 3	*5800097500	Cover, Top	
1 - 4	5800095700	Button, Selector; B	
1 - 5	*5800097202	Escutcheon, Panel	
1 - 6	*5800097600	Escutcheon, Button	
1 - 7	5800092400	Button, Selector; A	
1 - 8	*5783114006	Flange Screw, M4 x 6 (BLK Ni)	
1 - 9	5800094001	Knob, Sub-VR	
1 - 10	5800098400	Button, AUTO	
1 - 11	5800098300	Button, DOWN	
1 - 12	5800098200	Button, UP	
1 - 13	*5800096003	Plate, Escutcheon	
1 - 14	5800094900	Button, Selector; C	
1 - 15	5800095500	Button, Power	
1 - 16	*5800095800	Escutcheon, Slider	

PARTS LOCATION-2

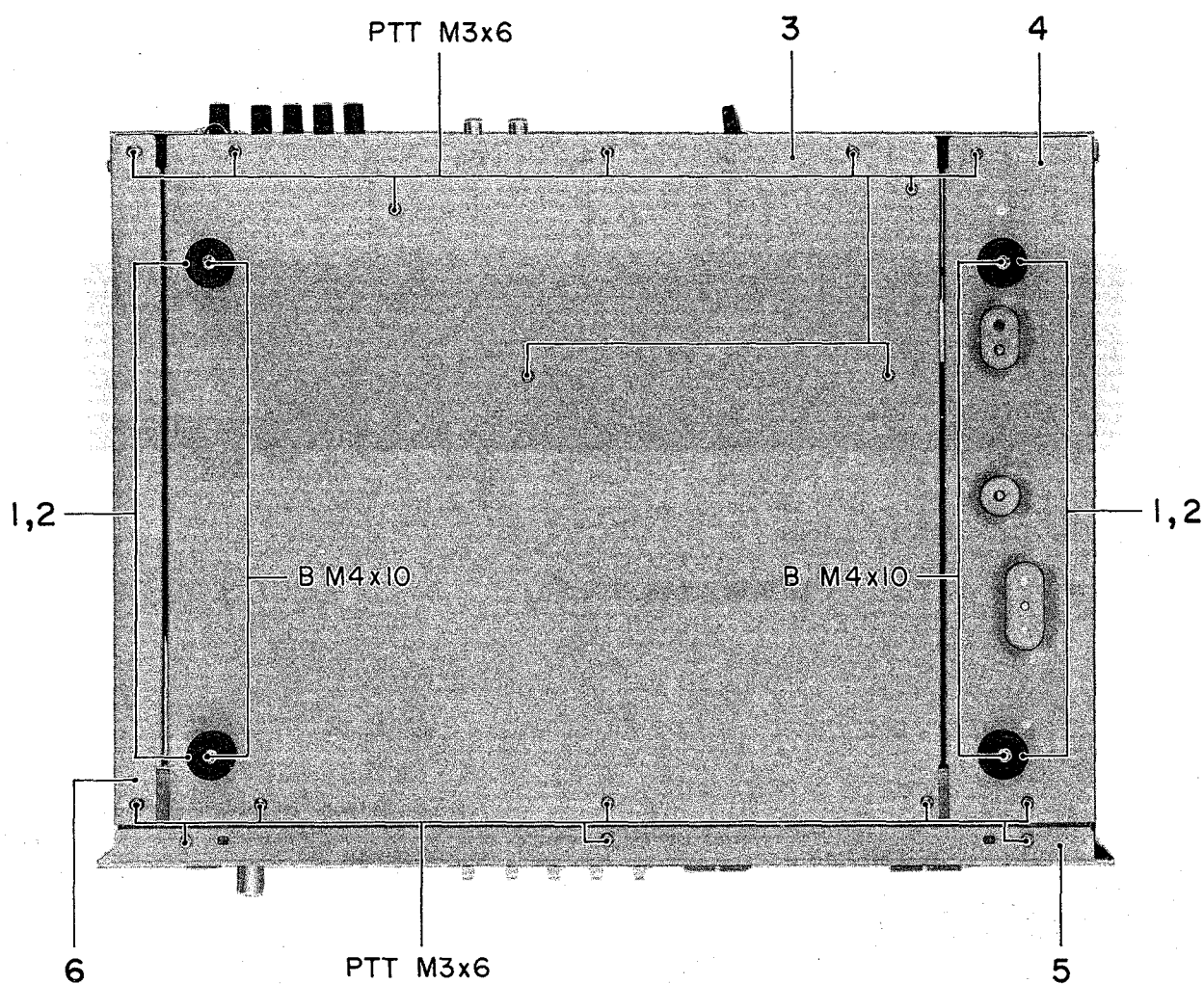


Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
2 - 1	*5800138700	Cover, Transformer	A-500
2 - 2	*5320007900	Transformer, Power [US]	
	*5320008000	Transformer, Power [GE]	
	*5320008100	Transformer, Power [E, UK, A]	
	*5320008200	Transformer, Power [C]	
	*5320010400	Transformer, Power [J]	
2 - 3	*5800136600	Plate, Shield	A-500
2 - 4	*5800094300	Chassis, L	
2 - 5	*5555570000	Cushion, Top Cover; B	
2 - 6	*5200025300	PCB-105 Assy, MAIN [C]	
	*5200025310	PCB-105 Assy, MAIN [US]	
	*5200025320	PCB-105 Assy, MAIN [E, UK]	
	*5200025330	PCB-105 Assy, MAIN [GE, A]	S601
	*5200025340	PCB-105 Assy, MAIN [J]	
2 - 7	*5800094401	Chassis, R	
2 - 8	*5200025500	PCB-160 Assy, SW [All except US]	
	*5200025510	PCB-160 Assy, SW [US]	
2 - 9	*5200025400	PCB-125 Assy, VR [All except US]	
	*5200025410	PCB-125 Assy, VR [US]	
2 - 10	*5800098001	Chassis, Front	S601
2 - 11	*5800097300	Panel, Front	
2 - 12	*5200025600	PCB-161 Assy, SW [All except US]	
	*5200025610	PCB-161 Assy, SW [US]	
2 - 13	*5300020700	Switch, Push; 2-2	
2 - 14	*5200026100	PCB-102 Assy, VOLTAGE SELECTOR [GE]	
2 - 15	*5800094200	Bracket, PCB-102 [GE]	

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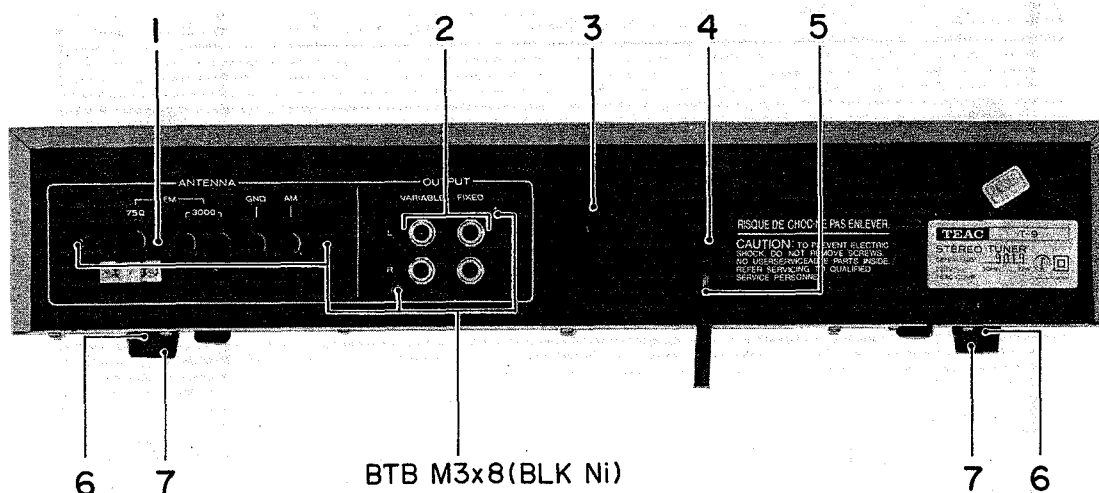
PARTS LOCATION-3



Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
3 - 1	*5800093800	Foot, L	
3 - 2	*5800093900	Foot, H	
3 - 3	*5800098100	Chassis, Bottom	
3 - 4	*5800094300	Chassis, L	
3 - 5	*5800097300	Panel, Front	
3 - 6	*5800094401	Chassis, R	

PARTS LOCATION-4

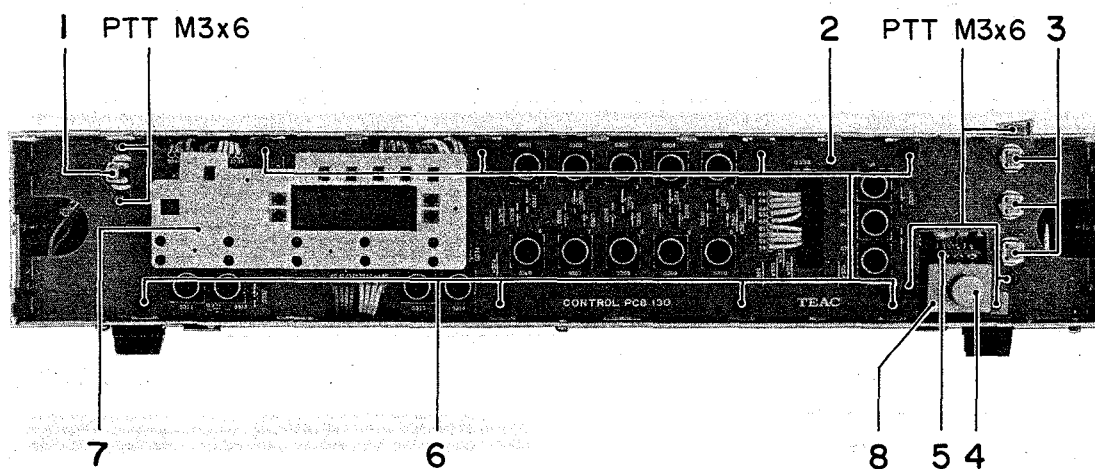


Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
4 - 1	5327005300	Terminal, Antenna; 5P	
4 - 2	5330505100	Jack, Pin; 4P	
4 - 3	*5800097400	Panel, Rear	
4 - 4	*5534660000	Strain Relief, Cord; 4N-4 [All except UK]	
	*5534661000	Strain Relief, Cord; 4K-1 [UK]	
4 - 5	△ 5128047000	Cord, AC Power [UK]	
	△ 5128075000	Cord, AC Power [US, C, GE]	
	△ 5350008200	Cord, AC Power [E]	
	△ 5350008300	Cord, AC Power [A]	
	△*5128034000	Cord, AC Power [J]	
4 - 6	*5800093800	Foot, L	
4 - 7	*5800093900	Foot, H	

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PARTS LOCATION-5

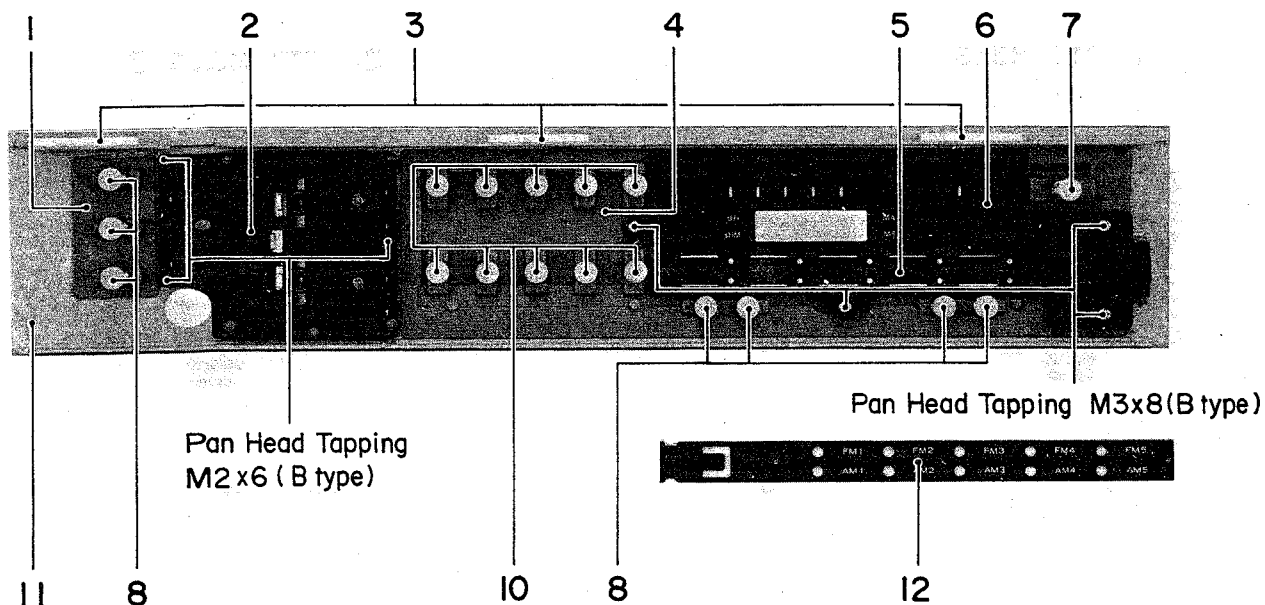


Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
5 - 1	△*5300020700	Switch, Push; 2-2	S601
5 - 2	*5200024900	PCB-130 Assy, CONTROL [All except US]	
	*5200024910	PCB-130 Assy, CONTROL [US]	
5 - 3	5300020800	Switch, Push; 3-gang	S401
5 - 4	*5800094001	Knob, Sub-VR	
5 - 5	*5200025400	PCB-125 Assy, VR [All except US]	
	*5200025410	PCB-125 Assy, VR [US]	
5 - 6	*5534118000	Rivet, Push	A-400
5 - 7	*5800097101	Hood, LED	
5 - 8	*5800094601	Bracket, Var. Res.	

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
 [A]: AUSTRALIA [J]: JAPAN

PARTS LOCATION-6



Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
6 - 1	*5800095900	Escutcheon, Selector	A-500
6 - 2	*5800097700	Plate	
6 - 3	*5555570000	Cushion, Top Cover; B	
6 - 4	*5800097201	Escutcheon, Panel	
6 - 5	*5800096900	Escutcheon, Indicator	
6 - 6	*5800096101	Panel, Display	
6 - 7	*5800092502	Rod, A	
6 - 8	*5800092300	Cap, B	
6 - 9	*5800097200	Escutcheon, Panel	
6 - 10	*5800092601	Rod, B	
6 - 11	*5800097300	Panel, Front	
6 - 12	*5640011200	Slider Assy	

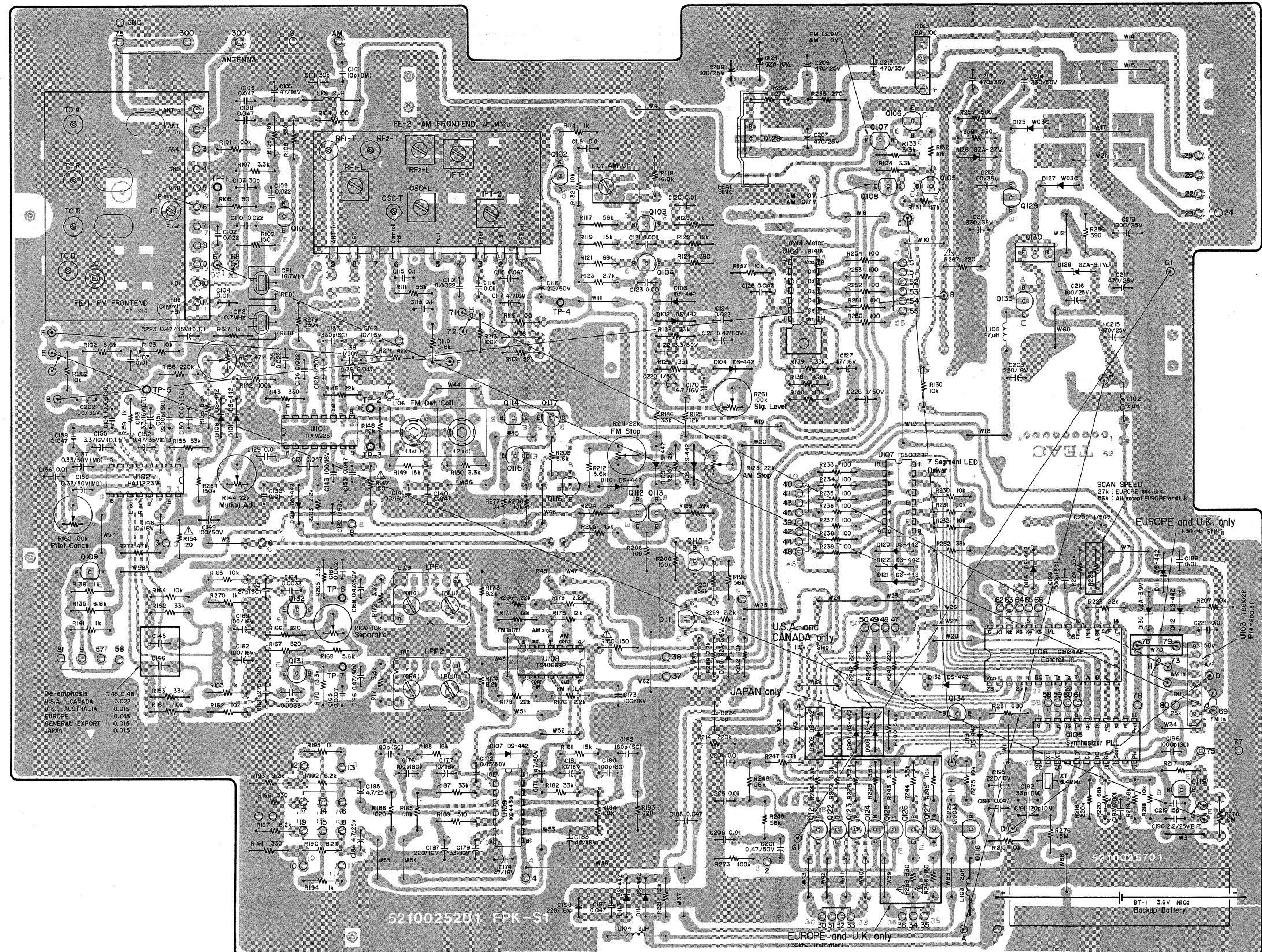
INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	5124064000	Antenna Assy, T-type	
	5350505700	Antenna, AM	
	5350007600	Cord Assy, In-output	
	5700009800	T-9 Owner's Manual	

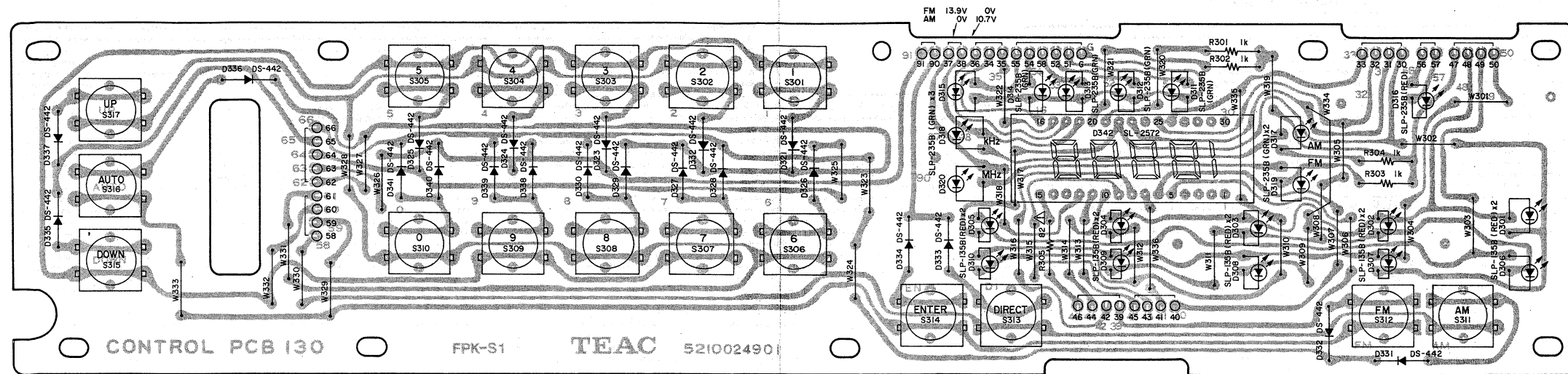
7 PC BOARDS AND PARTS LIST

PC Boards shown viewed from foil side.

MAIN PCB-105 ASSY

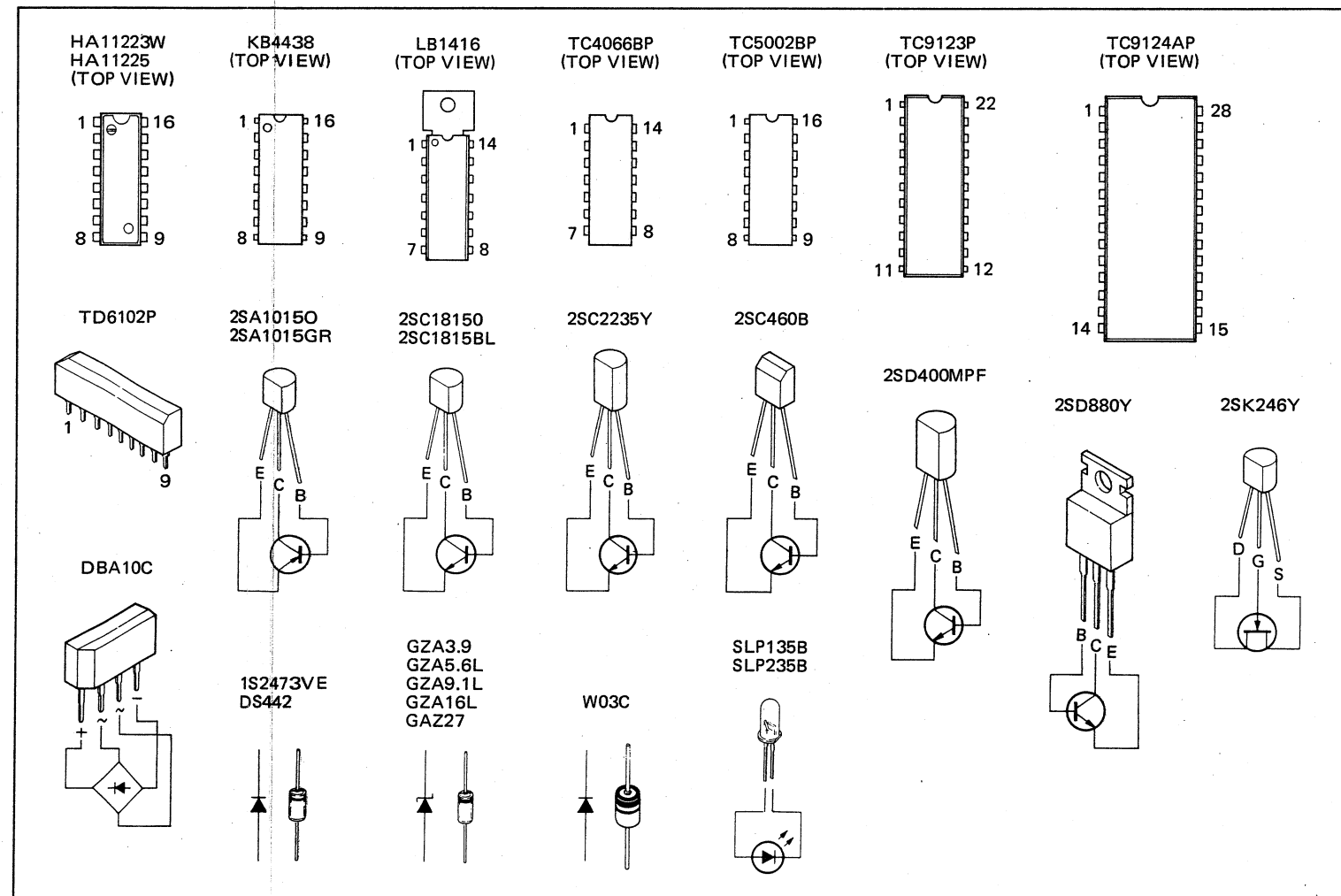
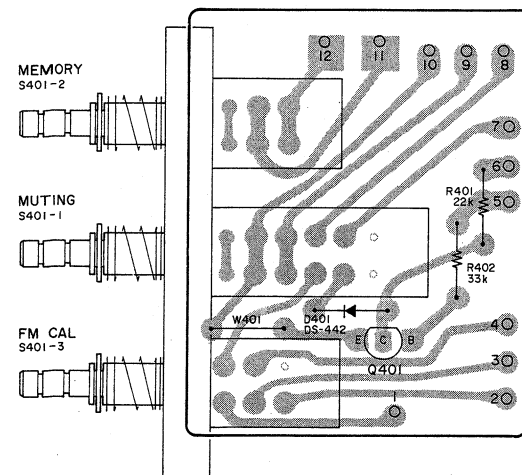


CONTROL PCB-130 ASSY



SEMICONDUCTOR ELECTRODES

SW PCB-160 ASSY



MAIN PCB-105 ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200025330	PCB-105 Assy [GE, A]
	5200025300	PCB-105 Assy [C]
	5200025310	PCB-105 Assy [US]
	5200025320	PCB-105 Assy [E, UK]
	5200025340	PCB-105 Assy [J]
	5210025700	PCB-105 [All except US]
	5210025300	PCB-105 [US]
FRONTENDS		
FE1	△5293000100	FM, FD216U [All except J]
	△5293001000	FM, FD216J [J]
FE2	△5293000200	AM, AEM32D
IC's		
U101	5147073000	HA11225
U102	5147075000	HA11223W
U103	5220012900	TD6102P
U104	5220405800	LB1416
U105	5220013000	TC9123PGR [All except J]
	5220013100	TC9123P [J]
U106	5220013200	TC9124AP
U107	5220013300	TC5002BP
U108	5220013400	TC4066BP
U109	5220406400	KB4438
TRANSISTORS		
Q101	5042394000	2SC460B
Q102	5232005100	FET 2SK246Y
Q103~Q106	5230770200	2SC1815O
Q107, Q108	5145136000	2SD400MPF
Q109, Q110	5230770200	2SC1815O
Q111	5230012600	2SA1015O
Q112	5230770400	2SC1815BL
Q113	5230770200	2SC1815O
Q114	5230770400	2SC1815BL
Q115	5230012600	2SA1015O
Q116	5230770200	2SC1815O
Q117	5145150000	2SA1015GR
Q118	5230012600	2SA1015O
Q119	5230770200	2SC1815O
Q121~Q124	5230770200	2SC1815O
Q125, Q126	5230770200	2SC1815O [E, UK]
Q127	5230012600	2SA1015O [E, UK]
Q128	5231755000	2SD8800
Q129	5145169000	2SC2235Y
Q130	5231755000	2SD8800
Q131, Q132	5230012600	2SA1015O
Q133	5145136000	2SD400MPF
Q134	5230770200	2SC1815O
DIODES		
D101~D107	5224013710	DS442
D108	5224519500	Zener GZA5.6L
D109~D114	5224013710	DS442
D116	5224013710	DS442
D120~D122	5224013710	DS442
D123	5224013600	DBA10C
D124	5224521700	Zener GZA16L
D125	5143315000	W03C
D126	5224522700	Zener GZA27
D127	5143315000	W03C
D128	5224520500	Zener GZA9, 1L
D129	5224013710	DS442

REF. NO.	PARTS NO.	DESCRIPTION
D130	5224519000	Zener GZA3, 9
D131	5224013710	DS442
D132	5042517000	1S2473VE
D901	5224013710	DS442 [All except J]
D902	5224013710	DS442 [E, UK]
D903	5224013710	DS442 [US, C]
RESISTORS		
All resistors are rated $\pm 5\%$, and $\frac{1}{4}$ watt and are carbon type.		
R101	5183130000	100k Ω
R102	5183100000	5.6k Ω
R103	5183106000	10k Ω
R104	5183058000	100 Ω
R105	5183062000	150 Ω
R106	5183112000	18k Ω
R107	5183094000	3.3k Ω
R108	5183070000	330 Ω
R109	5183062000	150 Ω
R110	5183100000	5.6k Ω
R111	5183124000	56k Ω
R113	5183114000	22k Ω
R114	5183082000	1k Ω
R115	5183058000	100 Ω
R116	5183070000	330 Ω
R117	5183124000	56k Ω
R118	5183102000	6.8k Ω
R119	5183110000	15k Ω
R120	5183082000	1k Ω
R121	5183126000	68k Ω
R122	5183108000	12k Ω
R123	5183092000	2.7k Ω
R124	5183072000	390 Ω
R125	5183108000	12k Ω
R126	5183118000	33k Ω
R127	5183082000	1k Ω
R129	5183118000	33k Ω
R130	5183106000	10k Ω
R131	5183122000	47k Ω
R132	5183106000	10k Ω
R133	5183094000	3.3k Ω
R134	5183094000	3.3k Ω
R135	5183102000	6.8k Ω
R136	5183082000	1k Ω
R137	5183106000	10k Ω
R138	5183102000	6.8k Ω
R139	5183118000	33k Ω
R140	5183110000	15k Ω
R141	5183082000	1k Ω
R142	5183130000	100k Ω
R143	5183070000	330 Ω
R145	5183114000	22k Ω
R146	5183118000	33k Ω
R147	△5183058000	100 Ω
R148	5183114000	22k Ω
R149	5183110000	15k Ω
R150	5183094000	3.3k Ω
R152	5183094000	3.3k Ω
R153	5183094000	3.3k Ω
R154	△5183060000	120 Ω
R155	5183118000	33k Ω
R156	5183100000	5.6k Ω
R158	5183138000	220k Ω
R159	5183082000	1k Ω
R161	5183106000	10k Ω

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
 [A]: AUSTRALIA [J]: JAPAN

REF. NO.	PARTS NO.	DESCRIPTION
R162	5183106000	10k Ω
R163	5183082000	1k Ω
R164	5183106000	10k Ω
R165	5183106000	10k Ω
R166	5183080000	820 Ω
R167	5183080000	820 Ω
R169	5183088000	1.8k Ω
R170	5183094000	3.3k Ω
R171	5183094000	3.3k Ω
R172	5183094000	3.3k Ω
R173	5183104000	8.2k Ω
R174	5183104000	8.2k Ω
R175	5183108000	12k Ω
R176	5183090000	2.2k Ω
R177	5183108000	12k Ω
R178	5183114000	22k Ω
R179	5183090000	2.2k Ω
R180	5183062000	150 Ω
R181	5183110000	15k Ω
R182	5183118000	33k Ω
R183	5183077000	620 Ω
R184	5183088000	1.8k Ω
R185	5183088000	1.8k Ω
R186	5183077000	620 Ω
R187	5183118000	33k Ω
R188	5183110000	15k Ω
R189	5183075000	510 Ω
R190	5183104000	8.2k Ω
R191	5183104000	8.2k Ω
R192	5183104000	8.2k Ω
R193	5183104000	8.2k Ω
R194	5183082000	1k Ω
R195	5183082000	1k Ω
R196	5183070000	330 Ω
R197	5183070000	330 Ω
R198	5183124000	56k Ω
R199	5183120000	39k Ω
R200	5183134000	150k Ω
R201	5183124000	56k Ω
R202	5183106000	10k Ω
R203	5183084000	1.2k Ω
R204	5183124000	56k Ω
R205	5183110000	15k Ω
R206	5183058000	100 Ω
R207	5183106000	10k Ω
R208	5183106000	10k Ω
R209	5183100000	5.6k Ω
R210	5183108000	12k Ω
R212	5183100000	5.6k Ω
R213	5183130000	100k Ω
R214	5183138000	220k Ω
R215	5183106000	10k Ω
R216	5183138000	220k Ω
R217	5183086000	1.5k Ω
R218	5183106000	10k Ω
R219	5183126000	68k Ω
R220	5183126000	68k Ω
R221	5183084000	1.2k Ω
R223	5183114000	22k Ω
R224	5183118000	33k Ω
R225	5183124000	56k Ω
R226	5183094000	3.3k Ω
R227	5183094000	3.3k Ω

REF. NO.	PARTS NO.	DESCRIPTION
R228	5183094000	3.3k Ω
R229	5183094000	3.3k Ω
R230	5183106000	10k Ω
R231	5183106000	10k Ω
R232	5183106000	10k Ω
R233~R239	5183058000	100 Ω
R240~R242	5183066000	220 Ω
R243, R244	5183094000	3.3k Ω [E, UK]
R245	5183106000	10k Ω [E, UK]
R246	△5183062000	150 Ω [E, UK]
R247	5183122000	47k Ω
R248	5183124000	56k Ω
R249	5183124000	56k Ω
R250~R254	5183058000	100 Ω
R255, R256	5183068000	270 Ω
R257, R258	5183076000	560 Ω
R259	5183072000	390 Ω
R262	5183106000	10k Ω
R263	5183090000	2.2k Ω
R264	5183134000	150k Ω
R265	5183094000	3.3k Ω
R266	5183114000	22k Ω
R267	△5183066000	220 Ω
R268	△5183070000	330 Ω [E, UK]
R269	5183090000	2.2k Ω
R270	5183082000	1k Ω
R271, R272	5183122000	47k Ω
R273	5183058000	100 Ω
R275	5183106000	10k Ω
R276	5181358000	1.5k Ω
R277	5183106000	10k Ω
R278	5183168000	10M Ω
R279	5183142000	330k Ω
R280	5183100000	5.6k Ω
R281	5183078000	680 Ω
CAPACITORS		
C101	5054740000	Dip. Mica 10pF 50V 10%
C102	5173391000	Ceramic 0.0022 μ F 50V 10%
C103	5173393000	Ceramic 0.01 μ F 50V 10%
C104	5173393000	Ceramic 0.01 μ F 50V 10%
C105	5173036000	Elec. 47 μ F 16V
C106	5173395000	Ceramic 0.047 μ F 50V 10%
C107	5172306000	Ceramic 33pF 50V 10%
C108	5173395000	Ceramic 0.047 μ F 50V 10%
C109	5173394000	Ceramic 0.022 μ F 50V 10%
C110	5173394000	Ceramic 0.022 μ F 50V 10%
C111	5173411000	Ceramic 33pF 50V 10%
C112	5173391000	Ceramic 0.0022 μ F 50V 10%
C113	5170449000	Mylar 0.1 μ F 100V 5%
C114	5173393000	Ceramic 0.01 μ F 50V 10%
C115	5170449000	Mylar 0.1 μ F 100V 5%
C116	5172996000	Elec. 2.2 μ F 50V
C117	5173036000	Elec. 47 μ F 16V
C118	5173395000	Ceramic 0.047 μ F 50V 10%
C119	5173393000	Ceramic 0.01 μ F 50V 10%
C120	5173393000	Ceramic 0.01 μ F 50V 10%
C121	5173390000	Ceramic 0.001 μ F 50V 10%
C122	5173000000	Elec. 3.3 μ F 50V
C123	5173390000	Ceramic 0.001 μ F 50V 10%
C124	5173394000	Ceramic 0.022 μ F 50V 10%
C125	5172990000	Elec. 0.47 μ F 50V

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN

REF. NO.	PARTS NO.	DESCRIPTION
C126	5173395000	Ceramic 0.047 μ F 50V 10%
C127	5173036000	Elec. 47 μ F 16V
C128	5172992000	Elec. 1 μ F 50V
C129	5173393000	Ceramic 0.01 μ F 50V 10%
C130	5173393000	Ceramic 0.01 μ F 50V 10%
C131	5173395000	Ceramic 0.047 μ F 50V 10%
C132	5173992000	Elec. 1 μ F 50V
C133	5173395000	Ceramic 0.047 μ F 50V 10%
C134	5173045000	Elec. 100 μ F 16V
C135	5173394000	Ceramic 0.022 μ F 50V 10%
C136	5173394000	Ceramic 0.022 μ F 50V 10%
C137	5172492000	Polyst. 330pF 50V 10%
C138	5172992000	Elec. 1 μ F 50V
C139	5173395000	Ceramic 0.047 μ F 50V 10%
C140	5173395000	Ceramic 0.047 μ F 50V 10%
C141	5173045000	Elec. 100 μ F 16V
C142	5173010000	Elec. 10 μ F 16V
C144	5170429000	Mylar 0.015 μ F 100V 5%
C145	5170433000	Mylar 0.022 μ F 100V 5%
C146	5170429000	Mylar 0.015 μ F 100V 5%
C147	5170433000	Mylar 0.022 μ F 100V 5%
C148	5173010000	Elec. 10 μ F 16V
C149	5173045000	Elec. 100 μ F 16V
C150	5172504000	Polyst. 1000pF 50V 10%
C151	5172512000	Polyst. 2200pF 50V 10%
C152	5054668100	Dip. Tant. 0.47 μ F 35V 20%
C153	5054653100	Dip. Tant. 3.3 μ F 16V 20%
C154	5172508000	Polyst. 1500pF 50V 10%
C155	5054653100	Dip. Tant. 3.3 μ F 16V 20%
C156	5173393000	Ceramic 0.01 μ F 50V 10%
C157	5173553800	Elec. 0.33 μ F 50V
C158	5170441000	Mylar 0.047 μ F 100V 5%
C159	5173553800	Elec. 0.33 μ F 50V
C160	5170413000	Mylar 0.0033 μ F 100V 5%
C161	5172490000	Polyst. 270pF 50V 10%
C162	5173045000	Elec. 100 μ F 16V
C163	5172490000	Polyst. 270pF 50V 10%
C164	5170413000	Mylar 0.0033 μ F 100V 5%
C165	5170411000	Mylar 0.0027 μ F 100V 5%
C166	5172990000	Elec. 0.47 μ F 50V
C167	5170411000	Mylar 0.0027 μ F 100V 5%
C168	5172990000	Elec. 0.47 μ F 50V
C169	5173045000	Elec. 100 μ F 16V
C170	5173004000	Elec. 4.7 μ F 25V
C171	5172990000	Elec. 0.47 μ F 50V
C172	5172990000	Elec. 0.47 μ F 50V
C173	5173045000	Elec. 100 μ F 16V
C174	5173036000	Elec. 47 μ F 16V
C175	5172486000	Polyst. 180pF 50V 10%
C176	5172480000	Polyst. 100pF 50V 10%
C177	5173010000	Elec. 10 μ F 16V
C178	5173054000	Elec. 220 μ F 16V
C179	5173027000	Elec. 33 μ F 16V
C180	5172480000	Polyst. 100pF 50V 10%

REF. NO.	PARTS NO.	DESCRIPTION
C181	5173010000	Elec. 10 μ F 16V
C182	5172480000	Polyst. 180pF 50V 10%
C183	5173036000	Elec. 47 μ F 16V
C184	5173004000	Elec. 4.7 μ F 25V
C185	5173004000	Elec. 4.7 μ F 25V
C186	5173395000	Ceramic 0.047 μ F 50V 10%
C188	5173395000	Ceramic 0.047 μ F 50V 10%
C190	5171472000	Elec. 2.2 μ F 25V (BP)
C191	5054256000	Dip. Mica 120pF 50V 10%
C192	5054351000	Dip. Mica 33pF 50V 10%
C193	5173390000	Ceramic 0.001 μ F 50V 10%
C194	5173395000	Ceramic 0.047 μ F 50V 10%
C195	5173054000	Elec. 220 μ F 16V
C196	5172504000	Polyst. 1000pF 50V 10%
C197	5173395000	Ceramic 0.047 μ F 50V 10%
C198	5173054000	Elec. 220 μ F 16V
C199	5172504000	Polyst. 1000pF 50V 10%
C200	5172992000	Elec. 1 μ F 50V
C201	5172990000	Elec. 0.47 μ F 50V
C202	5173047000	Elec. 100 μ F 35V
C203	5173054000	Elec. 220 μ F 16V
C204	5170425000	Mylar 0.01 μ F 100V 5%
C205	5170425000	Mylar 0.01 μ F 100V 5%
C206	5170425000	Mylar 0.01 μ F 100V 5%
C207	5173073000	Elec. 470 μ F 25V
C208	5173046000	Elec. 100 μ F 25V
C209	5173073000	Elec. 470 μ F 25V
C210	5173074000	Elec. 470 μ F 35V
C211	5173065000	Elec. 330 μ F 35V
C212	5173047000	Elec. 100 μ F 35V
C213	5173074000	Elec. 470 μ F 35V
C214	5173066000	Elec. 330 μ F 50V
C215	5173073000	Elec. 470 μ F 25V
C216	5173046000	Elec. 100 μ F 25V
C217	5173073000	Elec. 470 μ F 25V
C218	5173082000	Elec. 1000 μ F 25V
C219	5173407000	Ceramic 15pF 50V 10%
C220	5172992000	Elec. 1 μ F 50V
C221	5173393000	Ceramic 0.01 μ F 50V 10%
C223	5054668100	Dip. Tant. 0.47 μ F 35V 20%
C224	5173400000	Ceramic 5pF 50V
C225	5170437000	Mylar 0.033 μ F 100V 5%
C226	5172992000	Elec. 1 μ F 50V

VARIABLE RESISTORS

R128	5280026403	Semi-fixed 22k Ω (B)
R144	5280026403	Semi-fixed 22k Ω (B)
R157	5280026003	Semi-fixed 4.7k Ω (B)
R160	5280026803	Semi-fixed 100k Ω (B)
R168	5280026203	Semi-fixed 10k Ω (B)
R211	5280026403	Semi-fixed 22k Ω (B)
R261	5280026803	Semi-fixed 100k Ω (B)

COILS/FILTERS

L101~L104	5286001500	Choke Coil 2 μ H
L105	5160090000	Choke Coil 47 μ H (fixed)
L106	5160059000	Det. Coil 12mH (variable)
L107	5292802700	Ceramic Filter 459kHz
L108, L109	5286001300	Low-pass Filter 19kHz-38kHz
CF1, CF2	5189004000	Ceramic Filter 10.7MHz

REF. NO.	PARTS NO.	DESCRIPTION
MISCELLANEOUS		
CR1	5347000100	Crystal Resonator 6.4MHz
BT1	5347000300	Battery N-SB3
TP1~TP7	5544750000	Pin, Combination
	5555876000	Heatsink
	5210000200	PCB-143, SWITCH

CONTROL PCB-130 ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200024910	PCB-130 Assy [US]
	5200024900	PCB-130 Assy [All except US]
	5210025000	PCB-130 [US]
	5210024900	PCB-130 [All except US]
DIODES		
D301~D310	5225005400	LED SLP-135B (RED)
D311~D315	5225006400	LED SLP-235B (GRN)
D316	5225005400	LED SLP-135B (RED)
D317~D320	5225006400	LED SLP-235B (GRN)
D321~D341	5224013710	DS442
D342	5225006300	SL2572
CARBON RESISTORS		
R301~R304	5183082000	1k Ω 1/4W 5%
R305	5183056000	82 Ω 1/4W 5%
SWITCHES		
S301~S317	5138011000	Tact AKC-8C
MISCELLANEOUS		
	5800148400	Spacer, LED x 5

SW PCB-160 ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5200025510	PCB-160 Assy [US]
	5200025500	PCB-160 Assy [All except US]
	5210025500	PCB-160 [US]
	5210025900	PCB-160 [All except US]
TRANSISTOR		
Q401	5230770200	2SC18150
DIODE		
D401	5224013710	DS442
CARBON RESISTORS		
R401	5183114000	22k Ω 1/4W 5%
R402	5183118000	33k Ω 1/4W 5%
SWITCH		
S401	5300020800	Push, 3-gang

SWITCH PCB-161 ASSY (PC Board Omitted)

REF. NO.	PARTS NO.	DESCRIPTION
	5200025610	PCB-161 Assy [US]
	5200025600	PCB-161 Assy [All except US]
	5210025600	PCB-161 [US]
	5210026000	PCB-161 [All except US]
C601, C602	5173395000	Ceramic Cap. 0.047 μ F 50V 10%
S601	5134092000	Push Switch, 2-2

VR PCB-125 ASSY (PC Board Omitted)

REF. NO.	PARTS NO.	DESCRIPTION
	5200025410	PCB-125 Assy [US]
	5200025400	PCB-125 Assy [All except US]
	5210025400	PCB-125 [US]
	5210025800	PCB-125 [All except US]
R501	5282406702	Var. Res. 10k Ω (B) x 2

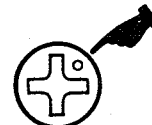
VOLTAGE SELECTOR PCB-102 ASSY [GE] (PC Board Omitted)

REF. NO.	PARTS NO.	DESCRIPTION
	5200026100	PCB-102 Assy [GE]
	5210026100	PCB-102 [GE]
PN01~PN04	5332010800	Pin, Terminal

[US]: U.S.A. [C]: CANADA [GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K.
[A]: AUSTRALIA [J]: JAPAN

ASSEMBLING HARDWARE CODING LIST

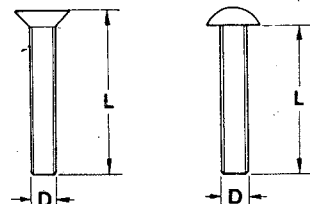
All screws conform to ISO standards, and have crossrecessed heads, unless otherwise noted.
ISO screws have the head inscribed with a point as in the figure to the right.



FOR EXAMPLE:

B M 3 x 6

----- Length in mm (L)
----- Diameter in mm (D) *
----- Metric System
----- Nomenclature



* Inner dia. for washers and nuts

	Code	Name	Type		Code	Name	Type
MACHINE SCREW	R	Round Head Screw		TAPPING SCREW	BTA	Binding Head Tapping Screw(A Type)	
	P	Pan Head Screw			BTB	Binding Head Tapping Screw(B Type)	
	T	Stove Head Screw (Truss)			RTA	Round Head Tapping Screw(A Type)	
	B	Binding Head Screw			RTB	Round Head Tapping Screw(B Type)	
	F	Flat Countersunk Head Screw		SETSCREW	SF	Hex Socket Setscrew(Flat Point)	
	O	Oval Countersunk Head Screw			SC	Hex Socket Setscrew(Cup Point)	
WOOD SCREW	RW	Round Head Wood Screw			SS	Slotted Socket Setscrew(Flat Point)	
TAPTITE SCREW	PTT	Pan Head Taptite Screw		WASHER	E	E-Ring (Retaining Washer)	
	WTT	Washer Head Taptite Screw			W	Flat Washer (Plain)	
SEMS SCREW	BSA	Binding Head SEMS Screw(A Type)			SW	Lock Washer (Spring)	
	BSB	Binding Head SEMS Screw(B Type)			LWI	Lock Washer (Internal Teeth)	
	BSF	Binding Head SEMS Screw(F Type)			LWE	Lock Washer (External Teeth)	
	PSA	Pan Head SEMS Screw(A Type)			TW	Trim Washer (Countersunk)	
	PSB	Pan Head SEMS Screw(B Type)		NUT	N	Hex Nut	

T-9

TEAC®

TEAC CORPORATION

3-7-3 NAKA-CHO MUSASHINO TOKYO PHONE (0422) 53-1111

TEAC CORPORATION OF AMERICA

7733 TELEGRAPH ROAD MONTEBELLO CALIFORNIA 90640 PHONE (213) 726-0303

TEAC AUSTRALIA PTY., LTD.

115 WHITEMAN STREET SOUTH MELBOURNE VICTORIA 3205 PHONE 699-6000

A

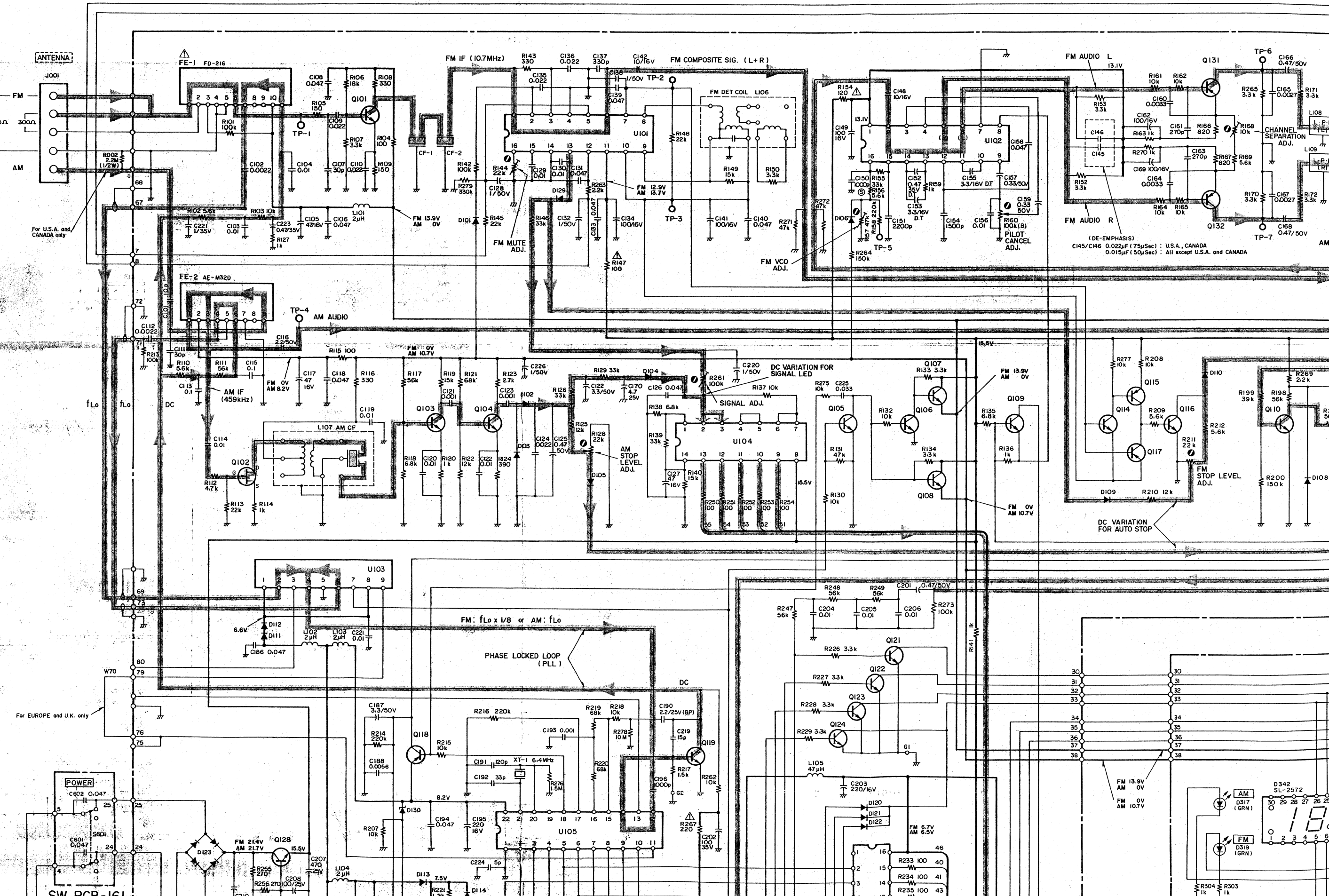
B

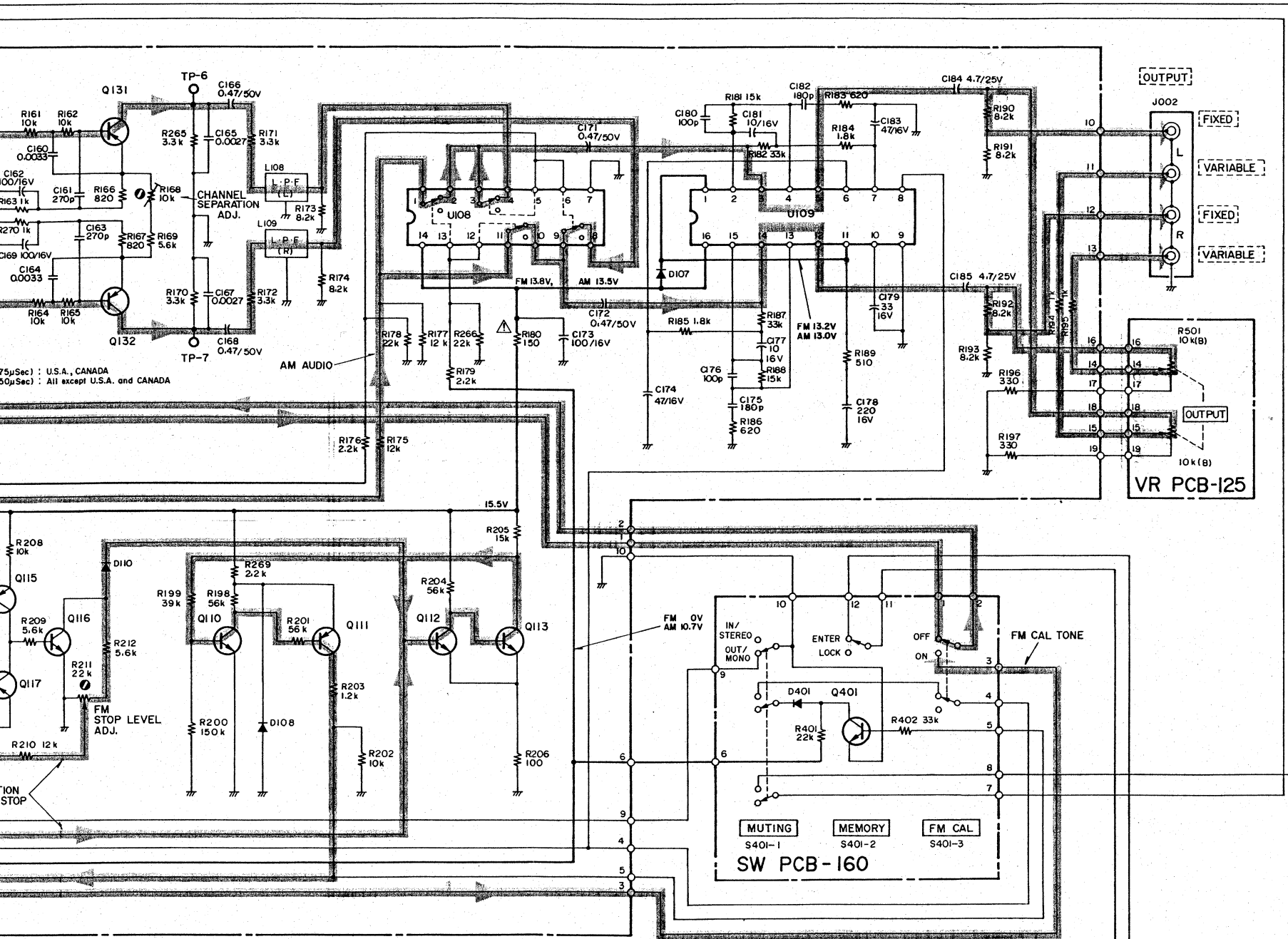
C

D

E

F





Voltage in each section

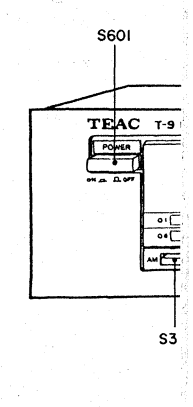
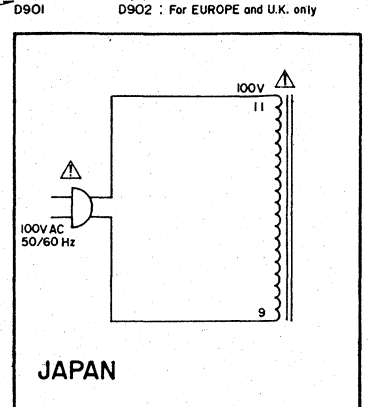
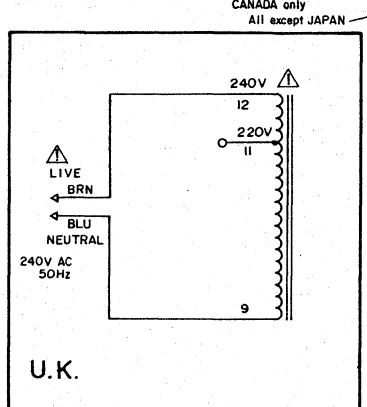
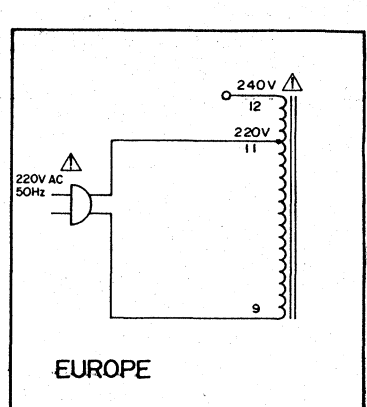
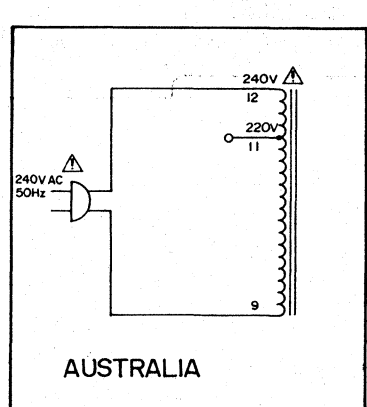
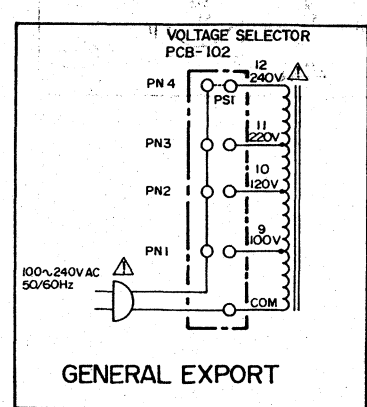
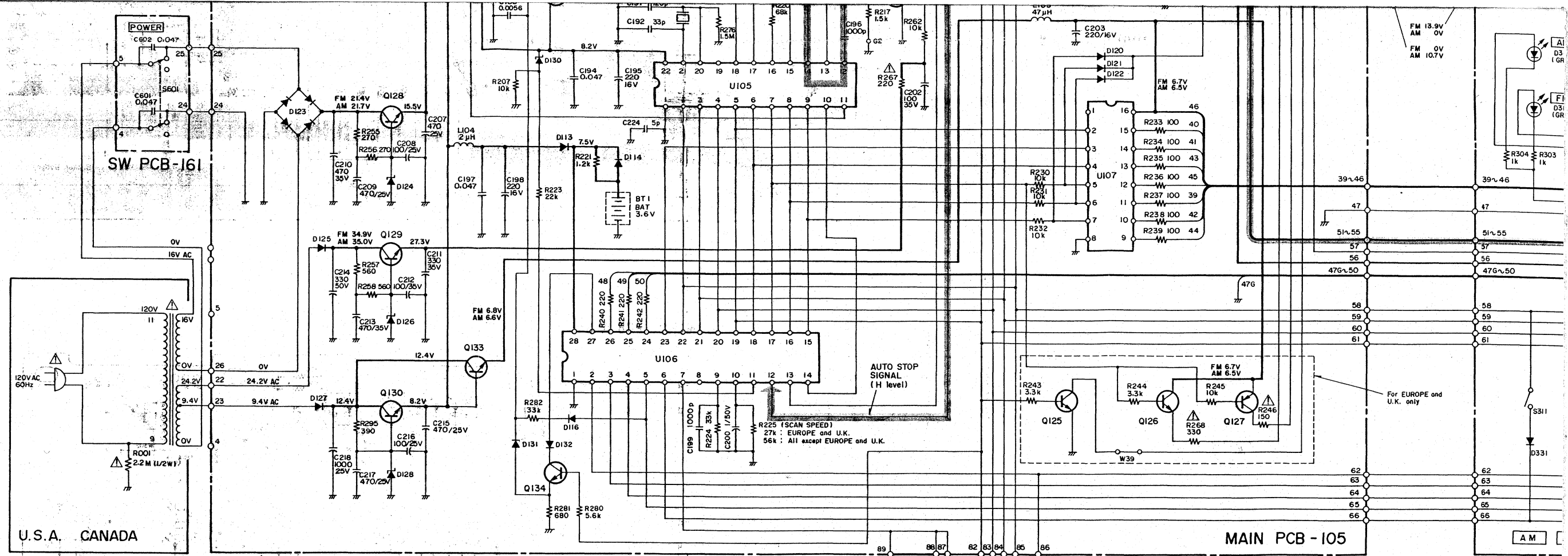
		FM	AM
Q101	E	1.1	0
	C	10.8	0
	B	1.8	0
Q102	D	0	10.4
	G	0	0
	S	0	0.8
Q103	E	0	0.5
	C	0	3.5
	B	0	1.1
Q104	E	0	0.8
	C	0	4.4
	B	0	1.4
Q105	E	0	0
	C	0	11.3
	B	0.7	0
Q106	E	0	0
	C	14.6	0
	B	0	0.7
Q107	E	13.9	0
	C	15.5	15.5
	B	14.6	0
Q108	E	0	10.7
	C	15.5	15.5
	B	0	11.3
Q109	E	15.5	15.5
	C	15.0	15.0
	B	15.5	15.5
Q110	E	0	0
	C	0.01	0.01
	B	0.7	0.7
Q111	E	5.4	5.4
	C	5.3	5.3
	B	4.7	4.7
Q112	E	0	0
	C	0	0
	B	0.6	0.6
Q113	E	0	0
	C	11.4	11.4
	B	0	0
Q114	E	5.7	5.7
	C	15.5	5.8
	B	5.6	6.3
Q115	E	15.5	6.4
	C	0.02	5.7
	B	15.5	5.8
Q116	E	0	0
	C	1.1	0
	B	0	0.7
Q117	E	5.7	5.7
	C	0	5.7
	B	6.0	6.3
Q118	E	8.2	8.2
	C	0.3	0.3
	B	8.2	8.2

		FM	AM
Q119	E	0	0
	C	8.0	4.8
	B	0.7	0.7
Q120	E	—	—
	C	—	—
	B	—	—
Q121	E	0	0
	C	1.5	1.7
	B	0.2	0.2
Q122	E	0	0
	C	1.1	1.3
	B	0.2	0.2
Q123	E	0	0
	C	1.1	1.3
	B	0.2	0.2
Q124	E	0	0
	C	3.5	1.3
	B	0.2	0.2
Q125	E	0	0
	C	3.2	3.2
	B	0.2	0.2
Q126	E	0.2	0.2
	C	6.7	6.5
	B	0.1	0.1
Q127	E	6.7	6.5
	C	6.7	6.7
	B	4.9	4.9
Q128	E	15.5	15.5
	C	21.4	21.7
	B	16.0	16.0
Q129	E	27.3	27.3
	C	34.9	35.0
	B	27.8	27.8
Q130	E	8.2	8.2
	C	12.4	12.4
	B	8.8	8.8
Q131	E	10.8	10.8
	C	4.0	4.0
	B	10.2	10.2
Q132	E	10.8	10.8
	C	4.0	4.0
	B	10.2	10.2
Q133	E	6.8	6.6
	C	12.4	12.4
	B	8.2	8.2
Q134	E	0.2	0.2
	C	1.7	1.0
	B	0.4	0.4

		FM	AM
Q401	E	0	0
	C	0.01	0.04
	B	0.6	0.7

		FM	AM
U101	1	3.0	2.7
	2	2.0	3.4
	3	2.0	2.7
	4	0	0
	5	0.2	2.8
	6	5.6	5.7
	7	5.8	6.3
	8	5.6	5.7
	9	5.7	5.7
	10	5.7	5.7
	11	12.9	13.7
	12	0.3	5.0
	13	5.2	0
	14	0	0
	15	0.3	5.1
	16	3.6	3.6
U102	1	13.1	13.1
	2	3.5	3.5
	3	5.0	5.0
	4	0.7	0.7
	5	10.1	10.1
	6	10.1	10.1
	7	0	0
	8	15.5	15.5
	9	5.6	5.6
	10	2.7	2.7
	11	2.7	2.7
	12	2.8	2.8
	13	0	0

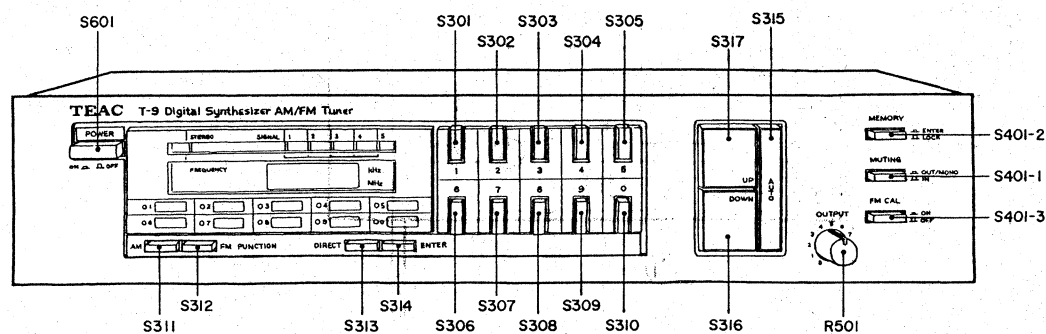
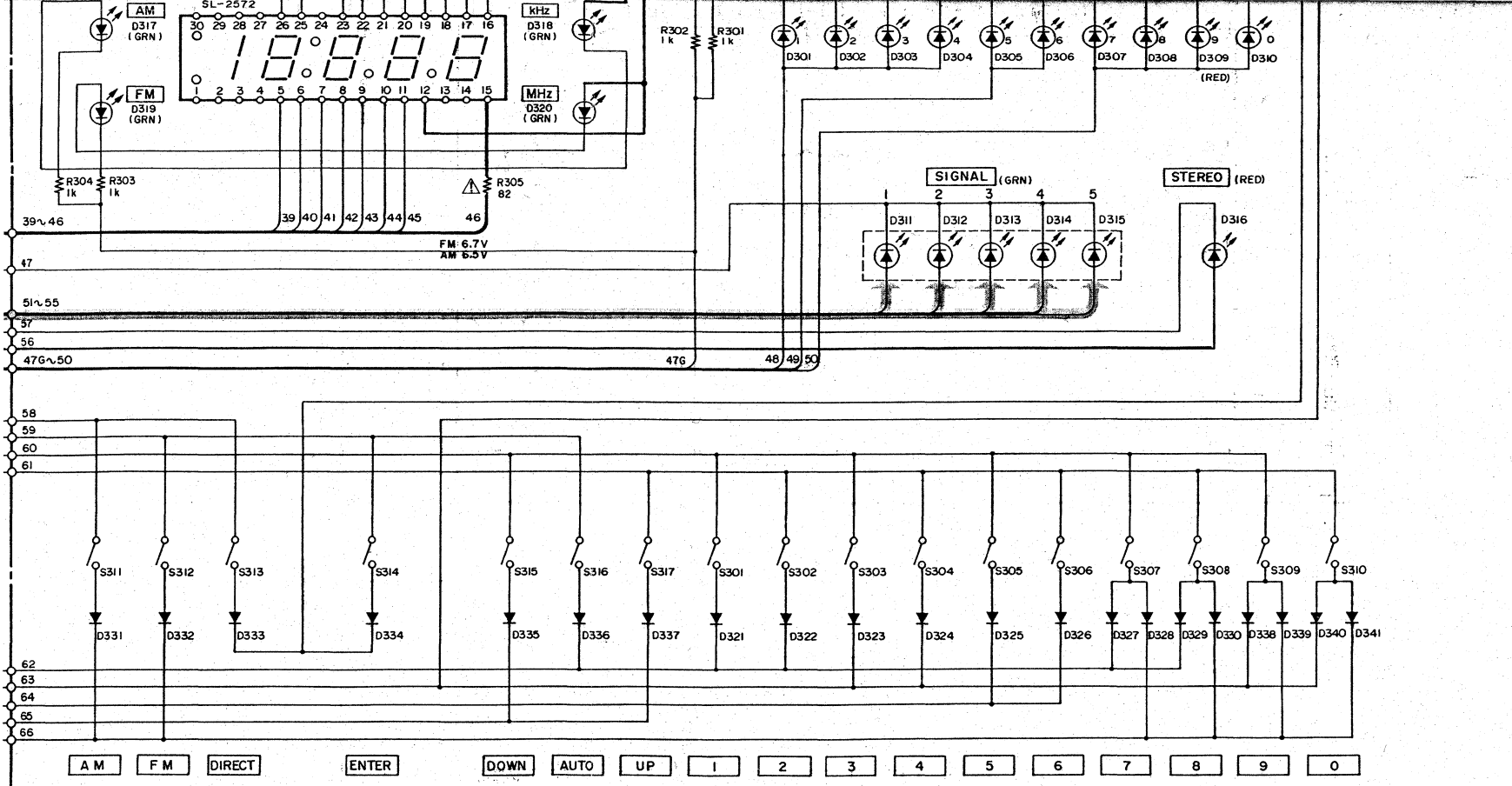
		FM	AM
U106	1	0	0
	2	0	0
	3	0	0
	4	0	0
	5	0	0
	6	0	0
	7	0	0
	8	7.5	7.5
	9	3.5	3.5
	10	0	0
	11	5.4	5.4
	12	4.6	4.6
	13	7.1	0
	14	1.8	1.8
	15	3.6	0
	16	0	0
	17	3.6	0
	18	1.8	1.8
	19	1.8	1.8
	20	1.8	1.8
	21	1.8	1.8
	22	1.8	1.8
	23	0.9	0.9
	24	0.8	0.5
	25	0.4	0.3
	26	2.5	3.0
	27	1.9	0
	28	7.5	7.5



MAIN PCB-105			
U101	HA11225	Q116	2SC18150
U102	HA11223W	Q117	2SA1015GR
U103	TD6102P	Q118	2SA10150
U104	LB1416	Q119	2SC18150
U105	TC9123P-GR (All except JAPAN)	Q120	(Not used)
	TC9123P (JAPAN only)		
U106	TC9124AR	Q121~Q124	2SC18150
U107	TE5002BP	Q125, Q126	2SC18150 (EUROPE & U.K. only)
U108	TC4066BP	Q127	2SA10150 (EUROPE & U.K. only)
U109	KB4438	Q128	2SD8800
		Q129	2SC2235Y
Q101	2SC460B	Q130	2SD8800
Q102	2SK246Y	Q131, Q132	2SA10150
Q103~Q106	2SC18150	Q133	2SD400MPF
Q107, Q108	2SD1400MPF	Q134	2SC18150
Q109, Q110	2SC18150		
Q111	2SA10150	D101~D107	DS-442
Q112	2SC1815BL	D108	GZA-5.6VL
Q113	2SC18150	D109~D114	DS-442
Q114	2SC1815BL	D115	(Not used)
Q115	2SC10150	D116	DS-442
SW PCB-106			
Q401	2SC18150		
D401	DS-442		
D117~D119	(Not used)		
D120~D122	DS-442		
D123	DBA-10C		
D124	GZA-16VL		
D125	W03C		
D126	GZA-27VL		
D127	W03C		
D128	GZA-9.1VL		
D129	DS-442		
D130	GZA-3.9V		
D131, D132	DS-442		
D901	DS-442 (All except JAPAN)		
D902	DS-442 (EUROPE & U.K. only)		
D903	DS-442 (U.S.A. & CANADA only)		

Differences depending on areas of distribution areas.

		U.S.A. CANADA	EUROPE U.K.	AUSTRIA
CSA standard	R001, R002	2.2MΩ (1/2W)	—	—
	indication	0.1 MHz	0.05 MHz	0.05 MHz
FM step	Q125~Q127	—	○	—
	D902	—	○	—
	W39, W70	—	○	—
	R243~R246	—	○	—
AM step	R268	—	○	—
	Step	10 kHz	9 kHz	9 kHz
De-emphasis	D903	○	—	—
	Time constant	75 μSec.	50 μSec.	50 μSec.
FM band	C145, C146	0.022 μF	0.015 μF	0.015 μF
	FE-1	FD-216U	FD-216U	FD-216U
Scan speed	U105	TC-9123P-GR	TC-9123P-GR	TC-9123F
	D901	○	○	○
	R225	56 kΩ	27 kΩ	56 kΩ



	AUSTRALIA	GENERAL EXPORT	JAPAN
	—	—	—
z	0.05 MHz	0.05 MHz	0.05 MHz
	—	—	—
	—	—	—
	—	—	—
	9 kHz	9 kHz	9 kHz
	—	—	—
	50 μ Sec.	50 μ Sec.	50 μ Sec.
	0.015 μ F	0.015 μ F	0.015 μ F
J	FD-216U	FD-216U	FD-216J
GR	TC-9123P-GR	TC-9123P-GR	TC-9123P
	○	○	—
	56 k Ω	56 k Ω	56 k Ω

NOTES

- All resistors are $\frac{1}{4}$ W, $\pm 5\%$, unless otherwise noted. Resistor values are in ohms (k = kilo — ohms, M = meg — ohms).
- All capacitor values are in microfarads (p = picofarads).
- The voltages given in the chart on the upper-right are reference values measured under the following conditions:
Switch settings:
POWER ON MEMORY LOCK
MUTING IN FM CAL OFF
FM reception mode: 83 MHz
1 kHz 100% modulation (mono)
ANT input: 1000 μ V
AM reception mode: 1000 kHz
1 kHz 30% modulation
ANT input: 5000 μ V
- : +B power supply circuit
- : Signal path (mainly for audio signal for FM and AM)
- : Phase Locked Loop (PLL) and Auto-stop signal system
- : Front panel indication
- Δ Parts marked with this sign are safely critical components. They must always be replaced with identical components — refer to the appropriate parts list and ensure exact replacement.

U102	1	13.1	13.1
	2	3.5	3.5
	3	5.0	5.0
	4	0.7	0.7
	5	10.1	10.1
	6	10.1	10.1
	7	0	0
	8	15.5	15.5
	9	5.6	5.6
	10	2.7	2.7
	11	2.7	2.7
	12	2.8	2.8
	13	2.8	2.8
	14	2.8	2.8
	15	4.4	4.4
	16	3.0	3.0
U103	1	6.6	6.6
	2	4.3	4.3
	3	6.0	6.0
	4	5.3	4.9
	5	0	0
	6	5.8	5.8
	7	7.1	0
	8	6.6	6.6
	9	5.9	6.2
U104	1	0.6	0.6
	2	0.6	0.6
	3	0.6	0.6
	4	2.7	2.7
	5	2.7	2.7
	6	0	0
	7	0	0
	8	15.5	15.5
	9	2.8	2.8
	10	2.8	2.8
	11	2.8	2.8
	12	2.8	2.8
	13	2.8	2.8
	14	2.8	2.8
U105	1	0	0
	2	1.8	1.8
	3	1.8	1.8
	4	1.8	1.8
	5	1.8	1.8
	6	1.8	1.8
	7	3.6	0
	8	0	0
	9	3.6	0
	10	1.8	1.8
	11	0	0.2
	12	3.5	3.3
	13	8.1	8.1
	14	0.7	0.7
	15	2.3	2.3
	16	2.3	2.3
	17	0	0
	18	8.2	8.2
	19	4.1	3.3
	20	3.6	3.6
	21	4.0	4.0
	22	8.2	8.2

	18	1.8	1.8
	19	1.8	1.8
	20	1.8	1.8
	21	1.8	1.8
	22	1.8	1.8
	23	0.9	0.9
	24	0.8	0.5
	25	0.4	0.3
	26	2.5	3.0
	27	1.9	0
	28	7.5	7.5
U107	1	1.7	0
	2	1.8	1.8
	3	0.9	0.9
	4	1.8	1.8
	5	2.0	0
	6	0	0
	7	2.0	0
	8	0	0
	9	3.4	0.3
	10	3.4	4.3
	11	3.4	4.3
	12	4.2	4.3
	13	4.1	5.1
	14	4.1	5.1
	15	4.1	4.3
	16	6.7	6.5
U108	1	0	0
	2	0	0
	3	0	0
	4	0	0
	5	12.7	0
	6	12.7	0
	7	0	0
	8	0	0
	9	0	0
	10	0	0
	11	0	0
	12	0	9.8
	13	0	9.8
	14	13.8	13.8
U109	1	13.2	13.0
	2	7.0	6.8
	3	6.8	6.7
	4	6.9	6.8
	5	6.9	6.9
	6	6.9	6.9
	7	7.0	6.9
	8	0.3	0.3
	9	0	0
	10	6.3	6.3
	11	13.2	13.0
	12	7.0	7.0
	13	7.0	6.8
	14	6.9	6.8
	15	7.0	6.8
	16	13.8	13.5

T-9
Digital Synthesizer AM/FM Tuner

PC BOARDS

PC Boards shown viewed from foil side.

MAIN PCB ASSY

